MISSION MANUAL

26-27 indi Missions: Smart City

💡 **A note about this Mission Manual**

This Mission Manual receives ongoing updates (major and minor). Each published version is official and mandatory for all Sphero Robotics Competition Events. New versions immediately supersede the preceding ones.

For any questions related to this Mission Manual, please email support@teamalliance.org.

Version History:

Version 1.0 - May 11, 2026 - initial release

Sphero Robotics Mission Common Rules	
SRM-CR1	Student-Powered Solutions: ***Mission*** solutions are designed, built, coded, and executed by students.
SRM-CR2	Single Participation: A ***Student*** can only be on one ***Team*** per ***Program*** per ***Season***.
SRM-CR3	TEAM Alliance Code of Conduct: ***Students***, ***Team Coordinators***, and spectators are expected to act with mutual respect, kindness, and integrity at all times.
SRM-CR4	Iterative Excellence: Celebrate learning from failure.
SRM-CR5	Creative Autonomy: Teams are encouraged to interpret the ***Mission Objectives*** through the lens of their own unique strategy. The Mission Manual provides the "What" (the objective) and the "Constraints" (the kit limits), but the "How" is entirely up to the ***Students***. The rules in this ***Mission Manual*** are the only rules.
SRM-CR6	3D printing is allowed as long as it follows Student-Powered Solutions <SRM-CR1>
SRM-CR7	Autonomous Solutions: Once a robot's program has started, no ***Student*** interaction is permitted with the robot until the ***Mission*** is complete unless a specific rule in a ***Mission Manual*** allows it. An unpermitted ***Student*** interaction voids the results of that ***Mission***.

Safety Rules	
SRM-SR1	Signed Waivers: Any ***Student*** participating in the ***Sphero Robotics Missions*** must have a signed waiver.
SRM-SR2	Adult Supervision: A ***Team Coordinator*** must accompany a ***Team*** at all times.

In-Person Event Rules	
SRM-IPE1	At all ***In-Person Events*** or ***Remote Events***, ***Teams*** have timed rounds to attempt a ***Mission Objective*** as many times as desired. Teams must tell the ***Evaluator*** which attempt to record for their ***Individual Mission Score***.

SRM-IPE2	If a ***Team*** has begun their code before the round time is called, the ***Team*** will be allowed to let their code finish.
SRM-IPE3	A ***Team*** may only challenge the results of an ***Individual Mission Score*** before they leave the ***Mission Field*** area.
SRM-IPE4	All rounds of ***Mission Objectives*** remain ***Student-Powered. Team Coordinators*** may not provide assistance to a ***Team*** during ***Mission Objectives.***

indi Mission Rules:	
INDI-MR1	***Teams*** in ***indi Missions*** are classified as ***U9 Student***
INDI-MR2	There are three (3) ***Mission Objectives*** in the ***indi Missions***. Each ***Mission Objective*** is scored according to the respective points outlined in this document.

Robot and Hardware Rules	
INDI-RHR1	A ***Team*** must have two (2) Sphero indi Student Kits to fully complete the ***Mission Objectives***.

Mission Field Rules	
INDI-MF1	The ***Mission Field*** is two (2) indi Folding Code Mats side by side. The total size is 160 cm × 129 cm (5’ 3” x 4’ 3”) ***In-Person Events*** must use the indi Folding Code Mats as the ***Mission Field*** for the indi Missions. ***Event Hosts*** will supply the ***Mission Fields*** at ***In-Person Events***. ***Remote Events*** and ***Online Submissions*** can use any indi Code Mat or a homemade ***Mission Field*** with the correct dimensions.

Mission Participation Guidelines	
In-Person Event	***In-Person Events*** provide an opportunity for ***Teams*** to work on their ***Mission Objectives*** at home, school, or in their extracurricular club and then showcase their completed ***Mission Objectives*** in an ***In-Person Event*** format. ***Teams*** will be given three (3) minutes to set up for their ***Mission Objective. Teams*** will be given five (5) minutes to attempt their best run of their prepared ***Mission Objective*** for an ***Evaluator.*** This ***Evaluator*** will award an ***Individual Mission Score*** based on the ***Team's*** best attempt during the round and the ***Team's*** ability to thoroughly articulate an understanding of code and strategy with the ***Evaluator*** A ***Team's Total Score*** at a ***Qualifying Event*** can earn them ***Awards*** and qualification to a ***Championship Event.***
Online Submission	***Remote Submission*** is where ***Teams*** work on their ***Mission Objectives*** at home, school, or in their extracurricular club and submit them to be evaluated virtually. Each ***Event*** submission will be scored by the ***Sphero Robotics Missions Evaluators*** based on the scoring rubric. ***Online Submissions*** are due in Spring 2027—Date to be announced in a future ***Mission Manual*** revision. For each ***Mission Objective***, ***Teams*** must prepare the following deliverables for ***Remote Submission*:** ● Submit the following evidence of completion in the Google Slide Submission template (sphero.cc/SRM-indi-template). ○ VIDEO: Submit a publicly viewable video of the ***Mission Objective***. The video must: i. be submitted in a .mp4, .mov, or .avi format ii. be captured from top down perspective iii. show both indis for the entire ***Mission Objective*** ○ DOCUMENTATION: Describe your ***Team's*** process and strategy.

26-27 indi Mission Specific Terms

Garage	A ***Team***-created ***Ending Area*** for ***Mission Objective #3***
Number Markers	***Team***-created ***Field Elements*** for ***Mission Objective #3*** - paper or other craft supplies that signify numbers 1-6
Ramp	A ***Team***-created ***Field Object*** for indi to drive up and over for ***Mission Objective #2***
Tunnel	A ***Team***-created ***Field Object*** for indi to drive through for ***Mission Objective #2***
Waypoint	A ***Field Object*** that is a ***Tunnel*** or ***Ramp***

Mission Objective 1: Route Planner

Overview: As the morning commute begins in a Smart City, the public transit network comes to life. To ensure residents reach their destinations without delay, the city utilizes a fleet of autonomous shuttles that must navigate busy intersections with perfect timing.

In this ***Mission Objective***, ***Teams*** act as traffic controllers, coding two indi robots to depart from opposite ends of the city. The challenge is to orchestrate their paths so they pass each other closely within the city without ever making contact. Precision routing is required to ensure both indi robots reach their ***Ending Area*** safely and on schedule**.** Build up your city and let your indis traverse the streets in style!

MO ID	Objective	Possible Points
indi-M1-1	indi 1 and indi 2 begin in their ***Starting Areas*** on opposite sides of the ***Mission Field***. (10 points per indi)	20
indi-M1-2	Code a path for indi 1: 1. The path should use at least 8 tiles. (10 points) 2. indi 1 uses a red tile as its **Ending Area**. (10 points) 3. The ***Ending Area for*** indi 1 is a tile next to the ***Starting Area*** for indi 2. (20 points)	40
indi-M1-3	Code a path for indi 2: 1. The path should use at least 8 tiles. (10 points) 2. indi 2 uses a purple tile as its **Ending Area**. (10 points) 3. The ***Ending Area*** *for* indi 2 is a tile next to the ***Starting Area*** for indi 1. (20 points)	40
indi-M1-4	The path for indi 1 and indi 2 should have a point where the two indis are on adjacent tiles. While in motion, indi 1 and indi 2 must pass each other but never collide.	60
indi-M1-5	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, indi programs, or other efforts that surpass requirements. (0-20 points)	20
indi-M1-6	***Remote Submission* Only:** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, indi programs, and text explanations. (0-20 points) ***In-Person and Remote Events*:** In the process of setting up and running the ***Mission Objective*,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator*.** (0-20 points)	20
	Max Points:	200

Mission Objective 2: Delivery Dash

Overview: A Smart City thrives on speed. When a high-priority package is ordered, the autonomous delivery vehicles get to work ensuring that deliveries are handled accurately even through difficult terrain.

In this ***Mission Objective***, ***Teams*** code their indis to navigate a route that includes at least four unique city ***Waypoints***. Success depends on indi being able to traverse tunnels and ramps before returning back to its original location. In this dash for efficiency, make sure that indi hits all of the ***Waypoints***!

MO ID	Objective	Possible Points
indi-M2-1	Using whatever craft materials you have available, create four ***Waypoints*** that indi 1 and indi 2 will travel to. You need to have two of each type of ***Waypoints***: • **Tunnel** (10 points each; total of 20 points) • **Ramp** (10 points each; total of 20 points)	40
indi-M2-2	indi 1 and indi 2 begin at the same **Starting Area**. indi 2 begins its program shortly after indi 1 has started its program.	10
indi-M2-3	Code a path for indi 1: 1. The path should use at least 12 tiles. (5 points) 2. indi 1 must travel to at least two of the specific ***Waypoints*** from indi-M2-1. (20 points each; total of 40 points) 3. The ***Ending Area*** is a tile adjacent to the ***Starting Area***. (10 points)	55
indi-M2-4	Code a different path for indi 2: 1. The path should use at least 12 tiles. (5 points) 2. indi 2 must travel to at least two of the specific ***Waypoints*** from indi-M2-1. (20 points each; total of 40 points) 3. The ***Ending Area*** is a tile adjacent to the ***Starting Area*** (10 points)	55
indi-M2-5	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, indi programs, or other efforts that surpass requirements. (0-20 points)	20
indi-M2-6	***Remote Submission* Only:** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, indi programs, and text explanations. (0-20 points) ***In-Person and Remote Events*:** In the process of setting up and running the ***Mission Objective*,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator*.** (0-20 points)	20
	Max Points:	200

Mission Objective 3: Trash & Recycling

Overview: Maintaining a clean and sustainable environment is a core pillar of a Smart City's design. To keep the streets pristine, the city employs vehicles to collect recyclable and landfill waste.

This ***Mission Objective*** requires ***Teams*** to coordinate a dual collection effort across six different pickup zones marked throughout the city. Because the waste and recycling plants have different processing speeds, the two robots must never follow the same collection sequence. To maximize efficiency and conserve energy, ***Teams*** are encouraged to share paths where possible before both units return to the ***Garage*** for offloading.

MO ID	Objective	Possible Points
indi-M3-1	indi 1 and indi 2 begin their program from the same ***Starting Area.*** (5 points each)	10
indi-M3-2	***Teams*** build a ***Garage*** for the ***Ending Area*** that fits both indis.	20
indi-M3-3	***Teams*** place ***Number Markers*** in any spot and orientation on the ***Mission Field.***	20
indi-M3-4	Code a Trash path for indi 1: 1. The path should use at least 12 tiles. (10 points) 2. indi 1 must travel to all six ***Number Markers***, but cannot go in the same order as indi 2. (20 points) 3. indi ends in the **Ending Area** from indi-M3-2. (10 points)	40
indi-M3-5	Code a different path for indi 2. (Recycling) 1. The path should use at least 12 tiles. (10 points) 2. indi 2 must travel to all six ***Number Markers***, but cannot go in the same order as indi 1. (20 points) 3. indi ends in the **Ending Area** from indi-M3-2. (10 points)	40
indi-M3-6	After leaving the ***Starting Area***, the indis can share tiles as part of their path to each of the numbered markers to earn more points. (5 points each shared tile: maximum 30 points)	30
indi-M3-7	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, indi programs, or other efforts that surpass requirements. (0-20 points)	20
indi-M3-8	***Remote Submission* Only:** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, indi programs, and text explanations. (0-20 points) ***In-Person and Remote Events:*** In the process of setting up and running the ***Mission Objective*,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator*.** (0-20 points)	20
	Max Points:	200

Glossary:

Program	***Sphero Robotics Missions*** comprises three unique ***Programs***: • ***indi Missions*** • ***BOLT Missions*** • ***RVR Missions***
Student	Anyone born after May 1, 2007
Team	A group of ***Students***
U9 Student	Any ***Student*** born on or after Sept 1, 2017 meaning they will be 8 or younger on Aug 31, 2026
U12 Student	Any ***Student*** born on or after Sept 1, 2014 meaning they will be 11 or younger on Aug 31, 2026
U15 Student	Any ***Student*** born on or after Sept 1, 2011 meaning they will be 14 or younger on Aug 31, 2026
indi Missions	***Teams*** competing in this ***Program*** must consist of only ***U9 Students*** and at least one ***Team Coordinator***
BOLT Missions	***Teams*** competing in this ***Program*** must consist of only ***U12 Students*** and at least one ***Team Coordinator***
RVR Missions	***Teams*** competing in this ***Program*** may consist o*f only* ***U15 Students***, and at least one ***Team Coordinator***
Team Coordinator	An adult in a supervisory role for the ***Students*** that will handle the registration, submission, and management of ***Team*** meetings. ***Teams*** may have more than one ***Team Coordinator***.
Mission Objectives	Each ***Program*** is broken up into ***Mission Objectives*** that ***Teams*** will be evaluated on based on guidelines in this document
Mission Field	A defined space for each ***Program***. Reference individual ***Mission Manual*** for specific ***Mission Field*** guidelines

Individual Mission Score	A ***Team's*** score for an individual ***Mission Objective*** recorded by an ***Evaluator***
Total Score	The total combined score of all ***Individual Mission Scores*** for a ***Team***
Starting Area	The area of the ***Mission Field*** where robots begin a ***Mission Objective***
Ending Area	When required, the area of the ***Mission Field*** where robots finish their program
Manual Drive Mode	A driver controlled portion of a ***Mission Objective*** instead of programmed commands
Foul	Points deducted in some ***Mission Objectives*** if a team commits a ***Foul*** as outlined in the ***Mission Manual***. Unless stated otherwise, there is no limit on the number of ***Fouls*** a Team can receive in a ***Mission Objective***.
Obstacles	Defined as any object placed in the ***Mission Field*** as part of the setup for a ***Mission Objective*** that should be avoided as outlined in the ***Mission Manual***. If a robot drives into an ***Obstacle***, they will receive a ***Foul***.
Field Element	An element added to the ***Mission Field*** as specified in the ***Season*** rules
Field Object	A scored object added to the ***Mission Field*** as specified in the ***Season*** rules
Season	The approved timeline for participation in the ***Sphero Robotics Missions***. A standard ***Season*** runs from June 2026 through May 2027.
Event Host	Approved adult coordinator and primary contact to organize, plan, and implement successful Sphero Robotics Mission ***Events*** with the help of TEAM Alliance
Evaluator	A volunteer responsible for evaluating a ***Team's*** mission attempts during an ***Event***
Remote Submission	***Teams*** submit pre-recorded ***Mission Objectives*** to an ***Event Host*** for evaluation. This is an option for remote ***Season*** registrations.
In-Person Event	Events that are included as an option with in-person ***Season*** registrations. These events allow a ***Team*** to run ***Mission Objectives*** at a location with other ***Teams*** and an in-person ***Evaluator***.
Prequalifying Event	An early ***Season In-Person Event*** that doesn't qualify for a ***Championship Event*** (or any other ***Event***). An in-person ***Team*** registration does not include entry into a **Prequalifying Event.**
Qualifying Event	A ***Season In-Person Event*** that qualifies a ***Team*** for ***Championship Events***. An in-person ***Team*** registration includes entry into one **Qualifying Event.**
Remote Event	***Events*** that are included as an option with in-person ***Season*** registrations. These events allow a ***Team*** to run ***Mission Objectives*** remotely with other ***Teams*** and a remote ***Evaluator***.

Championship Event	A state, regional, or national event that serves as the culminating competition for ***Teams*** that qualify through designated ***Qualifying Events***. In the U.S., ***Championship Events*** are typically state-level, but may include multiple ***Championship Events*** within a single state or combining multiple states into a regional ***Championship Event.*** Internationally, regional or national ***Championship Events*** are used where geographic considerations apply.

MISSION MANUAL

26-27 BOLT Missions: Smart City

💡 **A note about this Mission Manual**

This Mission Manual receives ongoing updates (major and minor). Each published version is official and mandatory for all Sphero Robotics Competition Events. New versions immediately supersede the preceding ones.

For any questions related to this Mission Manual, please email support@teamalliance.org.

Version History:

Version 1.0 - May 11, 2026 - initial release

Sphero Robotics Mission Common Rules	
SRM-CR1	Student-Powered Solutions: ***Mission*** solutions are designed, built, coded, and executed by students.
SRM-CR2	Single Participation: A ***Student*** can only be on one ***Team*** per ***Program*** per ***Season***.
SRM-CR3	TEAM Alliance Code of Conduct: ***Students***, ***Team Coordinators***, and spectators are expected to act with mutual respect, kindness, and integrity at all times.
SRM-CR4	Iterative Excellence: Celebrate learning from failure.
SRM-CR5	Creative Autonomy: Teams are encouraged to interpret the ***Mission Objectives*** through the lens of their own unique strategy. The Mission Manual provides the "What" (the objective) and the "Constraints" (the kit limits), but the "How" is entirely up to the ***Students***. The rules in this ***Mission Manual*** are the only rules.
SRM-CR6	3D printing is allowed as long as it follows Student-Powered Solutions <SRM-CR1>
SRM-CR7	Autonomous Solutions: Once a robot's program has started, no ***Student*** interaction is permitted with the robot until the ***Mission*** is complete unless a specific rule in a ***Mission Manual*** allows it. An unpermitted ***Student*** interaction voids the results of that ***Mission***.

Safety Rules	
SRM-SR1	Signed Waivers: Any ***Student*** participating in the ***Sphero Robotics Missions*** must have a signed waiver.
SRM-SR2	Adult Supervision: A ***Team Coordinator*** must accompany a ***Team*** at all times.

In-Person Event Rules	
SRM-IPE1	At all ***In-Person Events*** or ***Remote Events***, ***Teams*** have timed rounds to attempt a ***Mission Objective*** as many times as desired. Teams must tell the ***Evaluator*** which attempt to record for their ***Individual Mission Score***.
SRM-IPE2	If a ***Team*** has begun their code before the round time is called, the ***Team*** will be allowed to let their code finish.
SRM-IPE3	A ***Team*** may only challenge the results of an ***Individual Mission Score*** before they leave the ***Mission Field*** area.
SRM-IPE4	All rounds of ***Mission Objectives*** remain ***Student-Powered. Team Coordinators*** may not provide assistance to a ***Team*** during ***Mission Objectives.***

BOLT Mission Rules:	
BOLT-MR1	***Teams*** in ***BOLT Missions*** are classified as ***U12 Student***
BOLT-MR2	There are four (4) ***Mission Objectives*** in the ***BOLT Missions***. Each ***Mission Objective*** is scored according to the respective points outlined in this document

Robot and Hardware Rules	
BOLT-RHR1	***Teams*** may use either BOLT or BOLT+ robots for the ***BOLT Missions***. The choice of robot may impact a ***Team's*** score based on a robot's capabilities. For the rest of this document, BOLT is a reference to either robot.
BOLT-RHR2	***Teams*** must use parts from the Blueprint Snap Sphero Robotics Missions Kit to complete the ***Mission Objectives*** as outlined in this ***Mission Manual***. All ***Mission Objectives*** can only utilize one (1) Blueprint Snap Sphero Robotics Missions Kit per ***Mission Objective.***

	Teams may use extra Blueprint Snap pieces or craft materials for non-functional decoration or to supplement when a ***Mission Objective*** doesn't specifically tell a ***Team*** how to build a ***Field Element*** for the ***Mission Field***. Blueprint Snap Sphero Robotics Missions Kit Contents*:* (8) 2x Pitch Truss (12) 3x Pitch Truss (12) 4x Pitch Truss (8) 5x Pitch Truss (6) 10x Pitch Truss (4) Linear Motion Bracket (2) 100 mm Tire (2) 90 mm Pulley (2) 45 mm Pulley (2) Spool (40) Connector (20) Cardboard Clamp (4) Turntable (2) Hinge (4) Lock Plate (4) Bearing Plate (4) 1x4 Plate (1) Ring Tool (2) 2x Pitch Capped Shaft (2) 3x Pitch Capped Shaft (2) 4x Pitch Capped Shaft (8) 0.5x Pitch Shaft Collar (2) 1m Rope (2) Rope Anchor
BOLT-RHR3	BOLT and Snap parts must be able to pass ***Inspection*** at ***Events***.
BOLT-RHR4	A ***Team*** must have two (2) BOLTs to fully complete the ***Mission Objectives***.

Mission Field Rules

BOLT-MFR1	The ***Mission Field*** is 1.00 m x 2.00 m divided into 10 cm x 10 cm grid squares. Grids are labeled A-T on the X axis, and 1-10 on the Y axis. ***In-Person Events*** must use the Sphero BOLT+ Code Mat as the ***Mission Field*** for the ***BOLT Missions***. ***Event Hosts*** will supply the ***Mission Fields*** at ***In-Person Events***.

	Remote Events and ***Online Submissions*** can use any BOLT Code Mat or a homemade ***Mission Field*** with the correct dimensions.
BOLT-MFR2	Except when specified in the ***Mission Manual*** for a specific ***Mission Objective***, Blueprint Snap parts and other elements of decoration may be secured to the ***Mission Field*** using non-permanent adhesive (painter's or masking tape are recommended)

Mission Participation Guidelines	
In-Person Event	***In-Person Events*** provide an opportunity for ***Teams*** to work on their ***Mission Objectives*** at home, school, or in their extracurricular club and then showcase their completed ***Mission Objectives*** in an ***In-Person Event*** format. ***Teams*** will be given three (3) minutes to set up for their ***Mission Objective. Teams*** will be given five (5) minutes to attempt their best run of their prepared ***Mission Objective*** for an ***Evaluator.*** This ***Evaluator*** will award an ***Individual Mission Score*** based on the ***Team's*** best attempt during the round and the ***Team's*** ability to thoroughly articulate an understanding of code and strategy with the ***Evaluator*** A ***Team's Total Score*** at a ***Qualifying Event*** can earn them ***Awards*** and qualification to a ***Championship Event.*** ***Championship Events*** must be completed by May 15th, 2027
Online Submission	***Remote Submission*** is where ***Teams*** work on their ***Mission Objectives*** at home, school, or in their extracurricular club and submit them to be evaluated virtually. Each ***Event*** submission will be scored by the ***Sphero Robotics Missions Evaluators*** based on the scoring rubric. ***Online Submissions*** are due in Spring 2027—Date to be announced in a future ***Mission Manual*** revision. For each ***Mission Objective, Teams*** must prepare the following deliverables for ***Remote Submission*:** ● Submit the following evidence of completion in the Google Slide Submission template (sphero.cc/SRM-bolt-template). ○ VIDEO: Submit a publicly viewable video of the ***Mission Objective***. The video must:

	i. be submitted in a .mp4, .mov, or .avi format ii. be captured from top down perspective iii. show both BOLTs for the entire ***Mission Objective*** iv. show the timer (if it's a timed ***Mission Objective***) ○ CODE: Submit a screenshot or image of the programs for both BOLT 1 and BOLT 2. ○ DOCUMENTATION: Describe your ***Team's*** process and strategy.

26-27 BOLT Mission Specific Terms

Turnstile	A **Field Object** required for ***Mission Objective #1.*** A ***Turnstile*** begins the **Mission Objective** in the closed position, and a ***Team*** receives points when ***Turnstile*** is in the open position.
Tunnel	A ***Field Element*** required for ***Mission Objective #1***
Small Building	A ***Field Element*** required for ***Mission Objective #2*** that has a 5 pitch x 5 pitch footprint
Medium Building	A ***Field Element*** required for ***Mission Objective #2*** that has a 10 pitch x 6 pitch footprint
Large Building	A ***Field Element*** required for ***Mission Objective #2*** that has a 10 pitch x 10 pitch footprint
Blueprint Interaction	A ***Field Object*** for **Mission Objective #3** where Blueprint Snap mechanical pieces are placed at the dead end of the **Trench** for BOLT to cause motion (push, pull, spin, knock over, etc.)
Trench	A ***Field Element*** required for ***Mission Objective #3*** - A ***Trench*** must conform to constraints outlined in **BOLT-M3-3**
Autonomous Cargo Vehicle	A ***Field Object*** required for ***Mission Objective #4***
Freight Sled	A ***Field Object*** required for ***Mission Objective #4***
Garage	A ***Field Element*** required for ***Mission Objective #4***

Mission Objective 1: Underground Synchronization

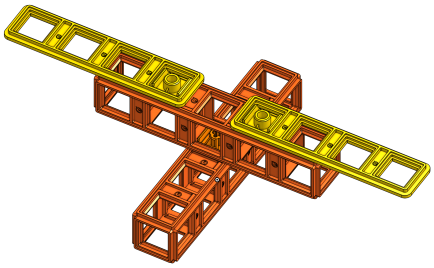
Overview: Beneath the bustling streets of a Smart City lies a complex network of utility tunnels and transit arteries. To keep the city running, autonomous maintenance bots must navigate these narrow passages to inspect infrastructure. In this mission, ***Teams*** must coordinate two BOLT robots as they swap shifts in the city's underground tunnel system.

The challenge is twofold: the robots must first clear the entrance by operating a mechanical ***Turnstile***, and then they must take turns navigating a narrow ***Tunnel*** without making contact. Precision and speed are vital to ensure the underground remains clear for the next shift.

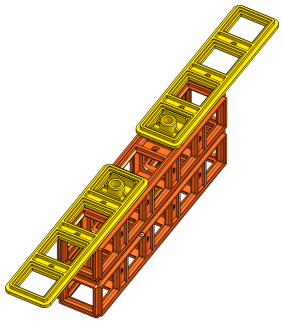
Mission Objective 1 Set Up:

1. Build two ***Turnstiles*** and place them at the intersection of E1-2 & F1-2 and O9-10 & P9-10 in the "closed" position" (pictured).

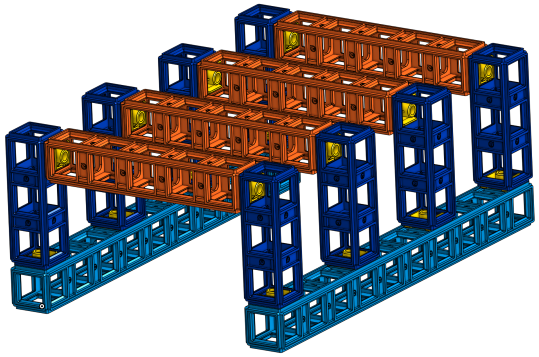
"Closed":



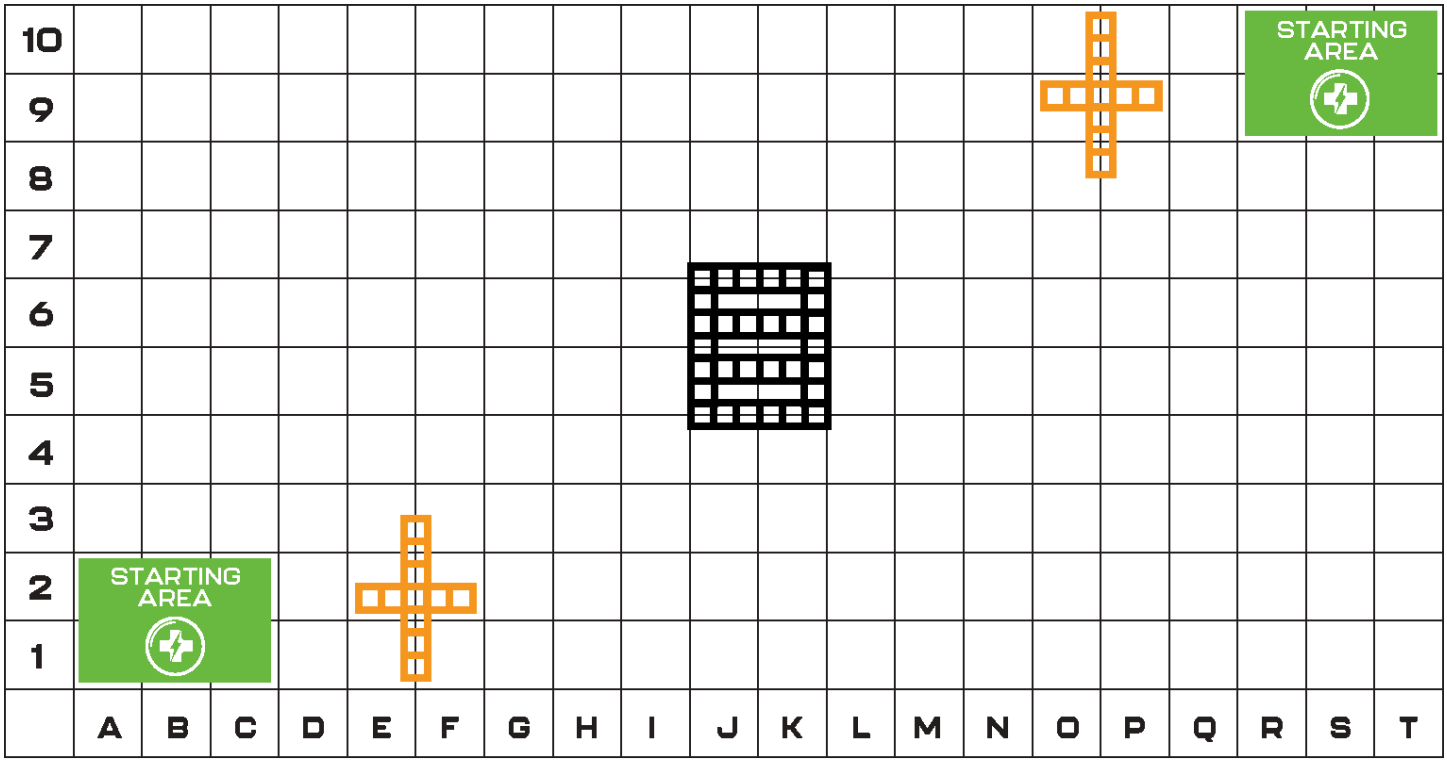
"Open":



2. Build the ***Tunnel*** and place it in J4 - J7 and K4 - K7.



3. Mark the ***Starting Area*** with markers, painter's tape or another method, in grid squares A1-C2, and R9-T10.



Mission Objective 1 Rules and Scoring:

Rule ID	Objective	Possible Points
BOLT-M1-1	***Mission Field*** is set up correctly to the diagram.	10
BOLT-M1-2	BOLT 1 and BOLT 2 begin in the ***Starting Area.*** (5 points per robot)	10
BOLT-M1-3	Execution of the programs for BOLT 1 and BOLT 2 begin at the same time.	10
BOLT-M1-4	This is a timed ***Mission Objective. Teams*** place a timer, stopwatch, or phone timer on the ***Mission Field***.	10
BOLT-M1-5	BOLT 1 and BOLT 2 roll to a ***Turnstile*** and move it to the open position. (10 points per turnstile)	20
BOLT-M1-6	BOLT 1 and BOLT 2 roll through the ***Tunnel*** at different times in opposite directions. (20 points per robot)	40
BOLT-M1-7	***Teams*** stop the timer once BOLT 1 and BOLT 2 reach the **Ending Area**. The ***Ending Area*** for each BOLT is to finish in the opposite BOLT's ***Starting Area***. For example, BOLT 1 finishes in BOLT 2's ***Starting Area***. (> 30 sec = 20 points, 15 - 30 sec = 40 points, < 15 sec = 60 points)	60
BOLT-M1-8	***Teams*** receive a ***Foul*** if BOLT 1 or BOLT 2 come in contact with each other, if BOLT 1 or BOLT 2 touch the ***Tunnel***, or if they leave the ***Mission Field***. (-5 points each ***Foul***)	
BOLT–M1-9	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, BOLT programs, or other efforts that surpass requirements. (0-20 points)	20
BOLT-M1-10	***Remote Submission Only:*** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, images of code, and text explanations. (0-20 points) ***In-Person and Remote Events Only:*** In the process of setting up and running the ***Mission Objective*****,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator*****.** (0-20 points)	20
	Max Points:	**200**

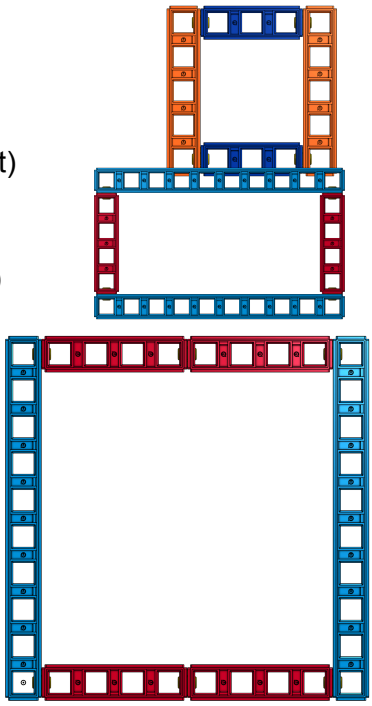
Mission Objective 2: The Morning Rush

Overview: In a thriving Smart City, efficiency is key. As the city grows, the demand for reliable public transportation increases. In this ***Mission Objective***, ***Teams*** will act as transit dispatchers. Your goal is to code two BOLT robots to navigate the city grid, servicing various residential and commercial hubs (***Small***, ***Medium***, and ***Large buildings***) to collect as many passengers as possible.

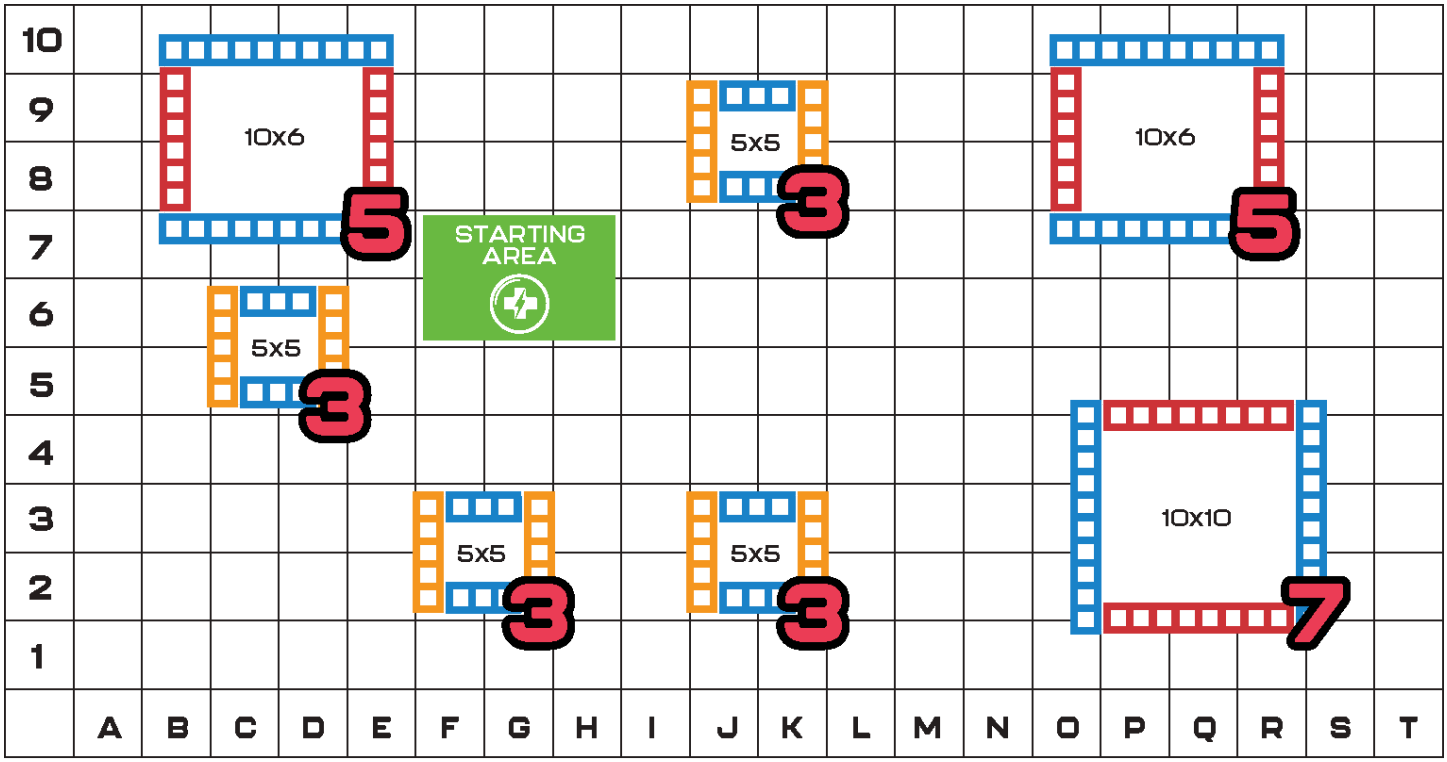
Success depends on high-speed precision and time management. Can your transit system clear the morning rush before the 45-second clock runs out?

Mission Objective 1 Set Up:

1) Use a Code Mat as the ***Mission Field***. You can also create your own ***Mission Field*** using another method.
2) Construct the building footprints and place them centered in the designated grid squares:
    - ***Small Building*** = 3 passengers (5 pitch x 5 pitch footprint)
        i) C5-C6, D5-D6
        ii) F2-F3, G2-G3
        iii) J2-J3, K2-K3
        iv) J8-J9, K8-K9
    - ***Medium Building*** = 5 passengers (10 pitch x 6 pitch footprint)
        i) C8-C9, D8-D9, E8-E9
        ii) P8-P9, Q8-Q9, R8-R9
    - ***Large Building*** = 7 passengers (10 pitch x 10 pitch footprint)
        i) P2-P4, Q2-Q4, R2-R4



3) Center the ***Buildings*** as much as possible in the center of the designated grid squares. The ***Buildings*** may be attached to the ***Mission Field*** with tape or other materials.
4) Mark the ***Starting Area*** with markers, painter's tape or another method in grid squares F6-F7, G6-G7, and H6-H7.


10
9
8
7
6
5
4
3
2
1
A B C D E F G H I J K L M N O P Q R S T
10x6
5
5x5
3
STARTING AREA
10x6
5
5x5
3
5x5
3
5x5
3
10x10
7

Mission Objective 2 Rules and Scoring:

Rule ID	Objective	Possible Points
BOLT-M2-1	***Mission Field*** is set up correctly to the diagram.	10
BOLT-M2-2	BOLT 1 and BOLT 2 begin in the ***Starting Area.*** (5 points each robot)	10
BOLT-M2-3	This is a timed ***Mission Objective***. ***Teams*** place a timer, stopwatch, or phone timer on the ***Mission Field***. ***Teams*** start the timer, then start the BOLT 1 and BOLT 2 programs at the same time.	10
BOLT-M2-4	BOLT 1 and BOLT 2 roll to ***Buildings***, stop in front of a ***Building***, and then drive around the perimeter to pick up passengers. For ***Teams*** to receive points for passengers "picked up": • BOLT comes to a stop at any grid square adjacent to the ***Building***. • BOLT travels around the ***Building*** returning to the original grid square. • BOLT comes to a complete stop. Once passengers have been picked up at a ***Building***, no more passengers may be picked up from the same ***Building*** by either BOLT. A "Stop" is defined as the robot coming to a complete stop before proceeding to the next command. If a BOLT moves before the full pause is complete, the passengers for that ***Building*** are not counted.	20
BOLT-M2-5	BOLT 1 and BOLT 2 show an image or animation on the screen at each ***Building*** during the passenger pickup.	10
BOLT-M2-6	After collecting passengers at buildings, BOLT 1 and BOLT 2 return to the ***Starting Area*** before 45 seconds have elapsed.	20
BOLT-M2-7	Total number of passengers picked up. (5 points per passenger; Max points available is 145 points) For ***Teams*** to receive points for passengers "picked up": • BOLT comes to a stop at any grid square adjacent to the ***Building***. • BOLT travels around the ***Building*** returning to the original grid square. • BOLT comes to a complete stop. • BOLT has to return to the ***Starting Area*** before 45 seconds has elapsed.	145
BOLT-M2-8	***Teams*** receive a ***Foul*** if BOLT 1 or BOLT 2 touch an ***Obstacle*** or if they leave the ***Mission Field***. (-5 points each ***Foul***)	

BOLT-M2-9	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, their BOLT programs, or other efforts that surpass requirements. (0-20 points)	20
BOLT-M2-10	***Remote Submission Only:*** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, images of code, and text explanations. (0-20 points) ***In-Person and Remote Events:*** In the process of setting up and running the ***Mission Objective*****,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator*****.** (0-20 points)	20
	Max Points:	**200**

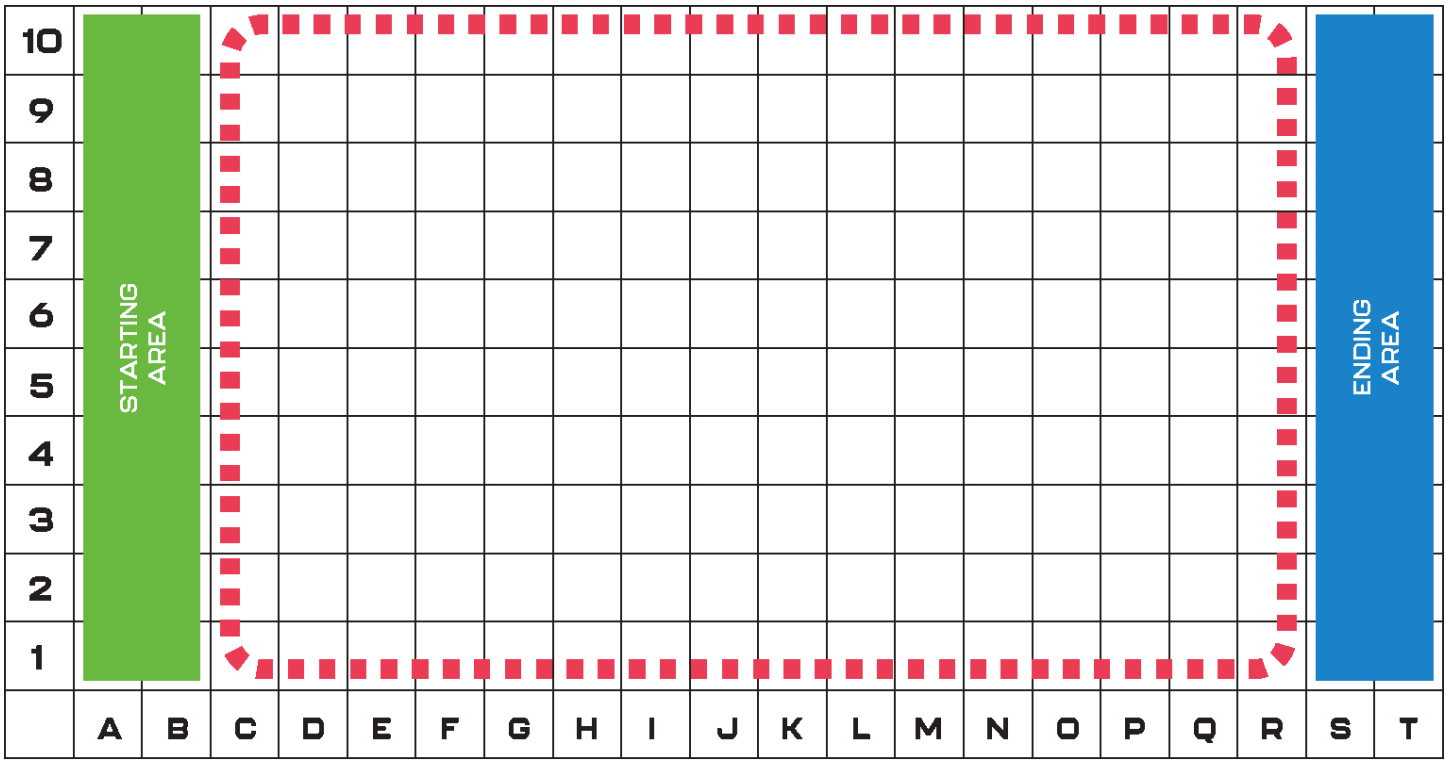
Mission Objective 3: City Underground - Trench Inspection

Overview: Deep beneath the Smart City, a complex system of maintenance ducts houses the electrical and water conduits that keep the city running. These trenches are narrow, winding, and hazardous. In this ***Mission Objective***, ***Teams*** must coordinate a high-stakes inspection.

BOLT 2 is a surface operator responsible for managing the high-security entrance and exit hatches of the duct. BOLT 1 is the trench investigator and must navigate the tight, multi-angled trench, locate a specific mechanical fault at a dead end, and successfully interact with the infrastructure to "reset" the system. Success requires a perfect blend of mechanical timing and precision movement to avoid damaging the sensitive trench walls.

Mission Objective 1 Set Up:

1) Use a Code Mat as the ***Mission Field***. You can also create your own ***Mission Field*** using another method.
2) Establish the ***Starting Area*** in columns A and B
3) Establish the ***Ending Area*** in Columns S and T
4) The remainder of the Mission Field is open to use for the ***Team*** to create a ***Trench*** system.



Mission Objective 3 Rules and Scoring:

Rule ID	Objective	Possible Points
BOLT-M3-1	***Mission Field*** is set up correctly to the diagram.	10
BOLT-M3-2	BOLT 1 and BOLT 2 begin in the ***Starting Area.*** (5 points each robot)	10

BOLT-M3-3	***Teams*** engineer a ***Trench*** with the following constraints:
	• ***Trench*** must have an entrance door and exit door built using Blueprint Snap and craft materials - door must be able to be opened and closed. (10 points)
	• ***Trench*** can be no wider than 20 cm—8x Blueprint Snap Pitch—wide at any point. (10 points)
	• Must have a dead end with a ***Blueprint Interaction.*** (10 points)
	• Must include 3 turn angles:
	  ○ One 45° turn (10 points)
	  ○ One 90° turn (10 points)
	  ○ One ***Team*** chosen angle (10 points)
	• ***Trench*** walls are at least 5 pitches high. (10 points)
	
	Trench walls must use Blueprint Snap parts as the base, but other craft materials may be used to meet the height requirement.Blueprint Snap pieces do not have have to be connected and craft materials can be used to span gaps between Blueprint Snap trusses
		70

BOLT-M3-4	BOLT 2 opens the entrance to the ***Trench***. *(20 points)* *** Bonus Points*: BOLT 2 closes the entrance after BOLT 1 enters the ***Trench***. (10 points)	20 *10
BOLT-M3-5	BOLT 1enters the ***Trench*** door and navigates through the ***Trench***.	20
BOLT-M3-6	BOLT 1 navigates to a dead end in the ***Trench*** and interacts in some way with a ***Blueprint Interaction*** (knock down, rotate, etc.).	20
BOLT-M3-7	BOLT 2 opens the exit door to the ***Trench***. (20 points) ***Bonus Points:*** BOLT 2 closes the entrance after BOLT 1 exits the ***Trench***. (10 points)	20
BOLT-M3-8	BOLT 1 and BOLT 2 end the program in the ***Ending Area***. *(5 points per robot)*	10
BOLT-M3-9	***Teams*** receive a ***Foul*** if BOLT 1 or BOLT 2 leave the ***Mission Field***. (-5 points each ***Foul***)	
BOLT-M3-10	***Teams*** can demonstrate creativity, attention to detail, and rigor through	20

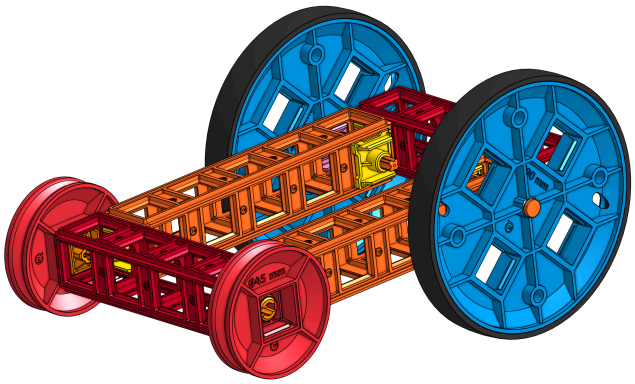
	Mission Field design and decoration, their BOLT programs, or other efforts that surpass requirements. (0-20 points)	
BOLT-M3-11	***Remote Submission Only:*** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, images of code, and text explanations. (0-20 points) ***In-Person and Remote Events:*** In the process of setting up and running the ***Mission Objective*****,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator****.* (0-20 points)	20
	Max Points:	**200***
	***Max Points with Bonus**	**220**

Mission Objective 4: Cargo Coordination

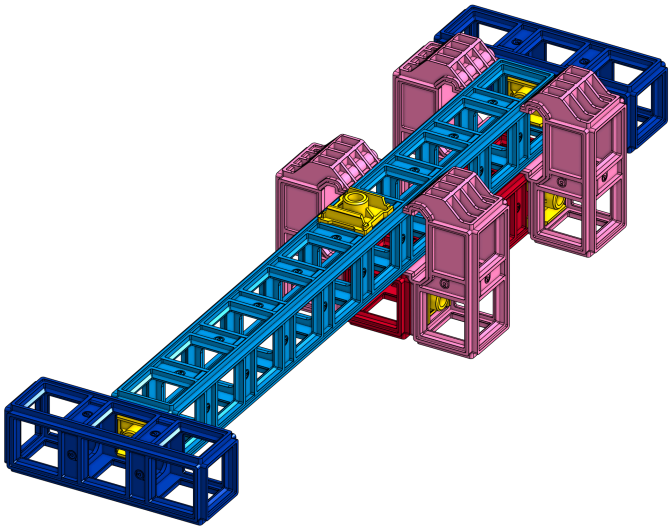
Overview: As the Smart City grows, the demand for efficient, contactless goods-handling increases. The city's central logistics hub is the heart of this operation, where automated systems manage the flow of heavy cargo and high-priority autonomous deliveries. In this ***Mission Objective***, ***Teams*** must coordinate two BOLT robots to perform precision heavy-lifting and autonomous delivery tasks to keep the city's supply chain moving.

Mission Objective 4 Set Up:

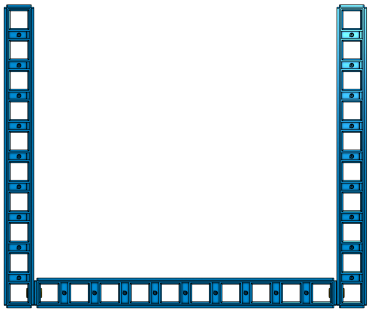
1) Use a Code Mat as the ***Mission Field***. You can also create your own ***Mission Field*** using another method.
2) Establish the ***Starting Area*** in S6-S7 and T6-T7.
3) Engineer the ***Autonomous Cargo Vehicle*** and place anywhere on the **Mission Field** before Zone 1

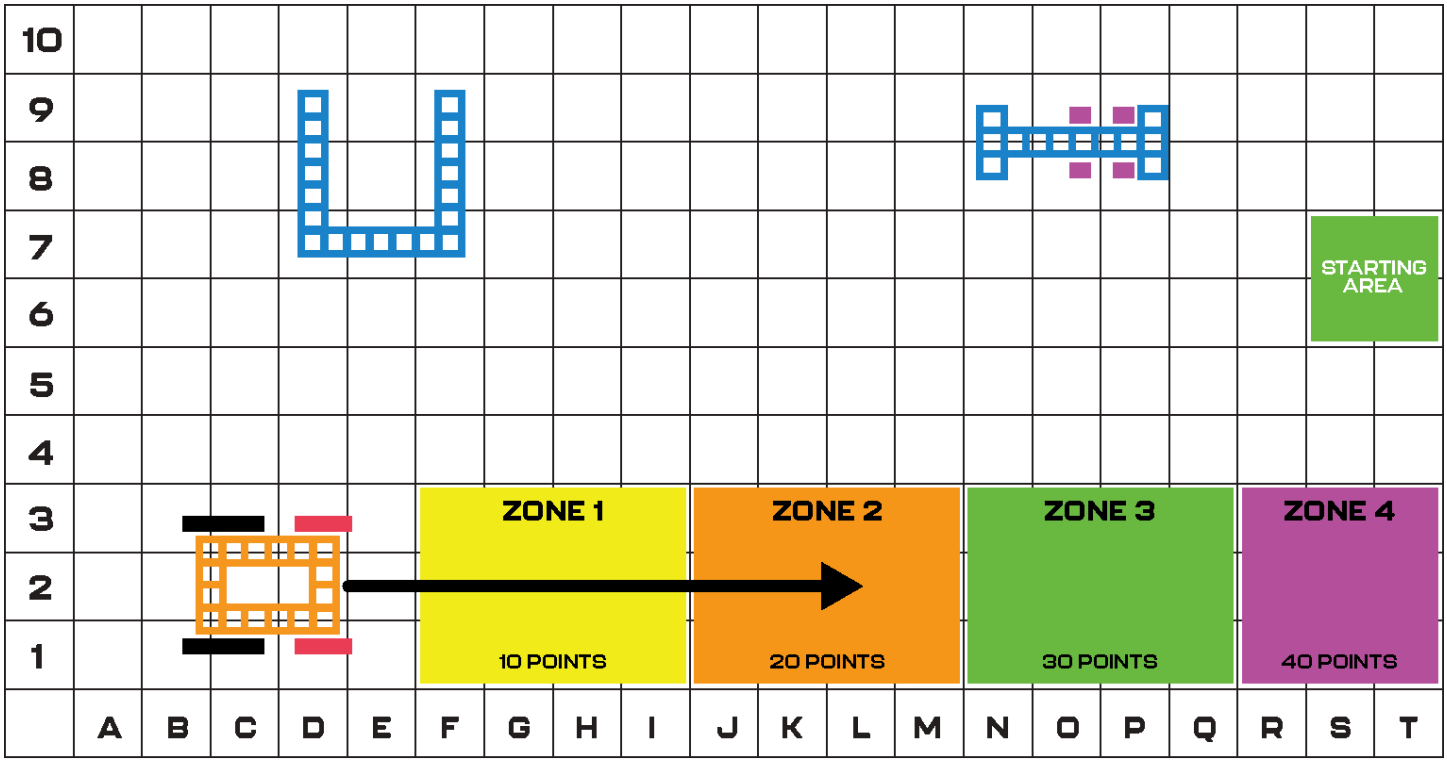


4) Engineer the ***Freight Sled*** and place on the **Mission Field** so the edge of the **Freight Sled** is split between row 8 and 9. The right edge of the **Freight Sled** is in Column P, but not Column Q.



5) Engineer a ***Garage***. ***Garage*** must be placed in grids D7-D9, E7-E9, and F7-F9




10
9
8
7
6
5
4
3
2
1
A B C D E F G H I J K L M N O P Q R S T
STARTING AREA
ZONE 1
10 POINTS
ZONE 2
20 POINTS
ZONE 3
30 POINTS
ZONE 4
40 POINTS

Mission Objective 4 Rules and Scoring:

Rule ID	Objective	Possible Points
BOLT-M4-1	***Mission Field*** is set up correctly to the diagram. The ***Autonomous Cargo Vehicle***, ***Freight Sled***, and ***Garage*** are built and placed according to specs.	10
BOLT-M4-2	BOLT 1 and BOLT 2 begin in the ***Starting Area.*** (5 points each robot)	10
BOLT-M4-3	BOLT1 and BOLT 2 begin the program at the same time.	10
BOLT-M4-4	BOLT 1 travels to the ***Freight Sled*** and pushes it into column Q so the yellow Snap Connector passes the Linear Motion Brackets .	40
BOLT-M4-5	BOLT 1 codes an animation, image, or text sequence on the LED matrix or screen to indicate the task has been completed.	10
BOLT-M4-6	BOLT 2 travels to the ***Autonomous Cargo Vehicle*** and pushes the **Autonomous Cargo Vehicle** forward.	20
BOLT-M4-7	The ***Autonomous Cargo Vehicle*** stops fully contained in: Zone 1 Columns F-I = 10 points Zone 2 Columns J-M = 20 points Zone 3 Columns N-Q = 30 points Zone 4 Columns R-T = 40 points If the ***Autonomous Cargo Vehicle*** is in two zones, it gets credit for the lower point zone.	40
BOLT-M4-8	BOLT 1 must end in the ***Garage***. **BOLT 2 ends in **Garage** = 10 bonus points*	20
BOLT-M4-9	***Teams*** receive a ***Foul*** if BOLT 1 or BOLT 2 leave the ***Mission Field***. (-5 points each ***Foul***)	
BOLT-M4-10	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, their BOLT programs, or other efforts that surpass requirements. (0-20 points)	20

BOLT-M4-11	***Remote Submission Only:*** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, images of code, and text explanations. (0-20 points) ***In-Person and Remote Events:*** In the process of setting up and running the ***Mission Objective*****,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator*****.** (0-20 points)	20
	Max Points:	**200***
	***Max Points with Bonus**	**210**

Glossary:

Program	***Sphero Robotics Missions*** comprises three unique ***Programs***: • ***indi Missions*** • ***BOLT Missions*** • ***RVR Missions***
Student	Anyone born after May 1, 2007
Team	A group of ***Students***
U9 Student	Any ***Student*** born on or after Sept 1, 2017 meaning they will be 8 or younger on Aug 31, 2026
U12 Student	Any ***Student*** born on or after Sept 1, 2014 meaning they will be 11 or younger on Aug 31, 2026
U15 Student	Any ***Student*** born on or after Sept 1, 2011 meaning they will be 14 or younger on Aug 31, 2026
indi Missions	***Teams*** competing in this ***Program*** must consist of only ***U9 Students*** and at least one ***Team Coordinator***
BOLT Missions	***Teams*** competing in this ***Program*** must consist of only ***U12 Students*** and at least one ***Team Coordinator***
RVR Missions	***Teams*** competing in this ***Program*** may consist o*f only* ***U15 Students***, and at least one ***Team Coordinator***
Team Coordinator	An adult in a supervisory role for the ***Students*** that will handle the registration, submission, and management of ***Team*** meetings. ***Teams*** may have more than one ***Team Coordinator***.
Mission Objectives	Each ***Program*** is broken up into ***Mission Objectives*** that ***Teams*** will be evaluated on based on guidelines in this document
Mission Field	A defined space for each ***Program***. Reference individual ***Mission Manual*** for specific ***Mission Field*** guidelines

Individual Mission Score	A ***Team's*** score for an individual ***Mission Objective*** recorded by an ***Evaluator***
Total Score	The total combined score of all ***Individual Mission Scores*** for a ***Team***
Starting Area	The area of the ***Mission Field*** where robots begin a ***Mission Objective***
Ending Area	When required, the area of the ***Mission Field*** where robots finish their program
Manual Drive Mode	A driver controlled portion of a ***Mission Objective*** instead of programmed commands
Foul	Points deducted in some ***Mission Objectives*** if a team commits a ***Foul*** as outlined in the ***Mission Manual***. Unless stated otherwise, there is no limit on the number of ***Fouls*** a Team can receive in a ***Mission Objective***.
Obstacles	Defined as any object placed in the ***Mission Field*** as part of the setup for a ***Mission Objective*** that should be avoided as outlined in the ***Mission Manual***. If a robot drives into an ***Obstacle***, they will receive a ***Foul***.
Field Element	An element added to the ***Mission Field*** as specified in the ***Season*** rules
Field Object	A scored object added to the ***Mission Field*** as specified in the ***Season*** rules
Season	The approved timeline for participation in the ***Sphero Robotics Missions***. A standard ***Season*** runs from June 2026 through May 2027.
Event Host	Approved adult coordinator and primary contact to organize, plan, and implement successful Sphero Robotics Mission ***Events*** with the help of TEAM Alliance
Evaluator	A volunteer responsible for evaluating a ***Team's*** mission attempts during an ***Event***
Remote Submission	***Teams*** submit pre-recorded ***Mission Objectives*** to an ***Event Host*** for evaluation. This is an option for remote ***Season*** registrations.
In-Person Event	Events that are included as an option with in-person ***Season*** registrations. These events allow a ***Team*** to run ***Mission Objectives*** at a location with other ***Teams*** and an in-person ***Evaluator***.
Prequalifying Event	An early ***Season In-Person Event*** that doesn't qualify for a ***Championship Event*** (or any other ***Event***). An in-person ***Team*** registration does not include entry into a **Prequalifying Event.**
Qualifying Event	A ***Season In-Person Event*** that qualifies a ***Team*** for ***Championship Events***. An in-person ***Team*** registration includes entry into one **Qualifying Event.**
Remote Event	***Events*** that are included as an option with in-person ***Season*** registrations. These events allow a ***Team*** to run ***Mission Objectives*** remotely with other ***Teams*** and a

	remote ***Evaluator***.
Championship Event	A state, regional, or national event that serves as the culminating competition for ***Teams*** that qualify through designated ***Qualifying Events***. In the U.S., ***Championship Events*** are typically state-level, but may include multiple ***Championship Events*** within a single state or combining multiple states into a regional ***Championship Event.*** Internationally, regional or national ***Championship Events*** are used where geographic considerations apply.

RVR™ MISSIONS

MISSION MANUAL

26-27 BOLT Missions: Smart City

💡 **A note about this Mission Manual**

This Mission Manual receives ongoing updates (major and minor). Each published version is official and mandatory for all Sphero Robotics Competition Events. New versions immediately supersede the preceding ones.

For any questions related to this Mission Manual, please email support@teamalliance.org.

Version History:

Version 1.0 - May 11, 2026 - initial release

Sphero Robotics Mission Common Rules	
SRM-CR1	Student-Powered Solutions: ***Mission*** solutions are designed, built, coded, and executed by students.
SRM-CR2	Single Participation: A ***Student*** can only be on one ***Team*** per ***Program*** per ***Season***.
SRM-CR3	TEAM Alliance Code of Conduct: ***Students***, ***Team Coordinators***, and spectators are expected to act with mutual respect, kindness, and integrity at all times.
SRM-CR4	Iterative Excellence: Celebrate learning from failure.
SRM-CR5	Creative Autonomy: Teams are encouraged to interpret the ***Mission Objectives*** through the lens of their own unique strategy. The Mission Manual provides the "What" (the objective) and the "Constraints" (the kit limits), but the "How" is entirely up to the ***Students***. The rules in this ***Mission Manual*** are the only rules.
SRM-CR6	3D printing is allowed as long as it follows Student-Powered Solutions <SRM-CR1>
SRM-CR7	Autonomous Solutions: Once a robot's program has started, no ***Student*** interaction is permitted with the robot until the ***Mission*** is complete unless a specific rule in a ***Mission Manual*** allows it. An unpermitted ***Student*** interaction voids the results of that ***Mission***.

Safety Rules	
SRM-SR1	Signed Waivers: Any ***Student*** participating in the ***Sphero Robotics Missions*** must have a signed waiver.
SRM-SR2	Adult Supervision: A ***Team Coordinator*** must accompany a ***Team*** at all times.

In-Person Event Rules

SRM-IPE1	At all ***In-Person Events*** or ***Remote Events***, ***Teams*** have timed rounds to attempt a ***Mission Objective*** as many times as desired. Teams must tell the ***Evaluator*** which attempt to record for their ***Individual Mission Score***.
SRM-IPE2	If a ***Team*** has begun their code before the round time is called, the ***Team*** will be allowed to let their code finish.
SRM-IPE3	A ***Team*** may only challenge the results of an ***Individual Mission Score*** before they leave the ***Mission Field*** area.
SRM-IPE4	All rounds of ***Mission Objectives*** remain ***Student-Powered. Team Coordinators*** may not provide assistance to a ***Team*** during ***Mission Objectives.***

RVR Mission Rules:	
RVR-MR1	***Teams*** in ***RVR Missions*** are classified as ***U15 Student***
RVR-MR2	There are five (5) ***Mission Objectives*** in the ***RVR Missions***. Each ***Mission Objective*** is scored according to the points outlined in this document.

Robot and Hardware Rules	
RVR-RHR1	***Teams*** may use either RVR or RVR+ robots for the **RVR Missions**. The choice of robot may impact a ***Team's*** score based on a robot's capabilities. For the rest of this document, RVR is a reference to either robot.
RVR-RHR2	***Teams*** must use parts from the Blueprint Snap Sphero Robotics Missions Kit to complete the ***Mission Objectives*** as outlined in the ***Mission Manual***. All ***Mission Objectives*** can only utilize one (1) Blueprint Snap Sphero Robotics Missions Kit per ***Mission Objective.*** ***Teams*** may use extra Blueprint Snap pieces or craft materials for non-functional decoration or to supplement when a ***Mission Objective*** doesn't specifically tell a ***Team*** how to build a ***Field Element*** for the ***Mission Field***. Blueprint Snap Sphero Robotics Missions Kit Contents: (8) 2x Pitch Truss (12) 3x Pitch Truss (12) 4x Pitch Truss (8) 5x Pitch Truss (6)10x Pitch Truss

	(4) Linear Motion Bracket (2) 100 mm Tire (2) 90 mm Pulley (2) 45 mm Pulley (2) Spool (40) Connector (20) Cardboard Clamp (4) Turntable (2) Hinge (4) Lock Plate (4) Bearing Plate (4) 1x4 Plate (1) Ring Tool (2) 2x Pitch Capped Shaft (2) 3x Pitch Capped Shaft (2) 4x Pitch Capped Shaft (8) 0.5x Pitch Shaft Collar (2) 1m Rope (2) Rope Anchor
RVR-RHR3	RVR and Snap parts must be able to pass ***Inspection*** at ***Events***.

Mission Field Rules

RVR-MFR1	The ***Mission Field*** is 1.50 m x 2.25 m divided into 25 cm x 25 cm grid squares. Grids are labeled A-I on the X axis, and 1-6 on the Y axis. ***In-Person Events*** must use the Sphero RVR Code Mat as the ***Mission Field*** for the ***RVR Missions***. ***Event Hosts*** will supply the ***Mission Fields*** at ***In-Person Events***. ***Remote Events and Online Submissions*** can use any RVR Code Mat or a homemade ***Mission Field*** with the correct dimensions.
RVR-MFR2	Except when specified in the ***Mission Manual*** for a specific ***Mission Objective***, Blueprint Snap parts and other elements of decoration may be secured to the ***Mission Field*** using non-permanent adhesive (painter's tape or masking tape are recommended)

Mission Participation Guidelines

In-Person Event	***In-Person events*** provide an opportunity for ***Teams*** to work on their ***Mission Objectives*** at home, school, or in their extracurricular club and then showcase their completed ***Mission Objectives*** in an ***In-Person Event*** format. ***Teams*** will be given three (3) minutes to set up for their ***Mission Objective. Teams*** will be given five (5) minutes to attempt their best run of their prepared ***Mission Objective*** for an ***Evaluator.*** This ***Evaluator*** will award an ***Individual Mission Score*** based on the ***Team's*** best attempt during the round and the ***Team's*** ability to thoroughly articulate an understanding of code and strategy with the ***Evaluator*** A ***Team's Total Score*** at a **Qualifying Event** can earn them ***Awards*** and qualification to a ***Championship Event.*** ***Championship Events*** must be completed by May 15th, 2027
Remote Submission	***Remote Submission*** is where ***Teams*** work on their ***Mission Objectives*** at home, school, or in their extracurricular club and submit them to be evaluated virtually. Each ***Event*** submission will be scored by the ***Sphero Robotics Missions Evaluators*** based on the scoring rubric. ***Online Submissions*** are due in Spring 2027—Date to be announced in a future ***Mission Manual*** revision. For each ***Mission Objective, Teams*** must prepare the following deliverables for ***Remote Submission*:** ● Submit the following evidence of completion in the Google Slide Submission template (sphero.cc/SRM-rvr-template). ○ VIDEO: Submit a publicly viewable video of the ***Mission Objective***. The video must: i. be submitted in a .mp4, .mov, or .avi format ii. be captured from top down perspective iii. show RVR for the entire ***Mission Objective*** iv. show the timer (if it's a timed ***Mission Objective***) ○ CODE: Submit a screenshot or image of the program for RVR ○ DOCUMENTATION: Describe your ***Team's*** process and strategy.

26-27 RVR Mission Specific Terms

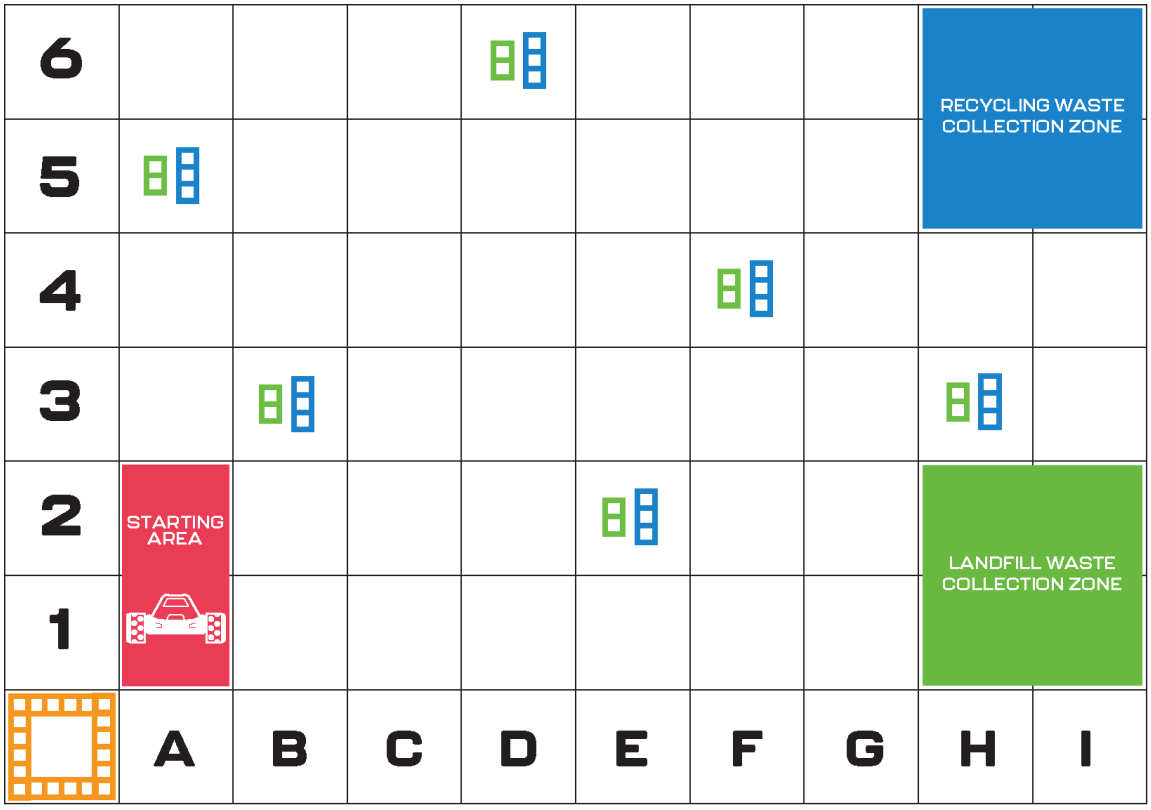
Waste Disposal Plow	A ***Field Element*** required for ***Mission Objective #1***
Placement Guide	A Snap build to help with placement of ***Field Objects*** in ***Mission Objective #1***
Recyclable Material	A ***Field Object*** required for ***Mission Objective #1***
Recycling Waste Collection Zone	An area of the ***Mission Field*** *in* ***Mission Objective #1***
Landfill Material	A ***Field Object*** required for ***Mission Objective #1***
Landfill Waste Collection Zone	An area of the ***Mission Field*** *in* ***Mission Objective #1***
Underpass and Overpass Structure	A ***Field Element*** required for ***Mission Objective #2***
Bus Stop	An area of the ***Mission Field*** *in* ***Mission Objective #2***
Bus Barn	An area of the ***Mission Field*** *in* ***Mission Objective #2***
Crops	A ***Field Object*** required for ***Mission Objective #3***
Harvesting Attachment	A ***Field Element*** attached to RVR required for ***Mission Objective #3***
Windmills	A ***Field Element*** required for ***Mission Objective #3***
Subway Tunnel	A ***Field Element*** required for ***Mission Objective #4***
Subway Sensor	A ***Field Object*** required for ***Mission Objective #4***
Modification Zone	An area of the ***Mission Field*** *in* ***Mission Objective #4***
Tower Sensor Activation Mechanism	A ***Field Element*** attached to RVR required for ***Mission Objective #4***
Tower Sensor	A ***Field Object*** required for ***Mission Objective #4***
Docking Ramp	A ***Field Element*** required for ***Mission Objective #5***

Docking Platform	A ***Field Element*** required for ***Mission Objective #5***
Docking Station	An area of the ***Mission Field*** *in* ***Mission Objective #5*** that includes the ***Docking Platform*** and ***Docking Ramp***.
Winch	A ***Field Element*** attached to RVR required for ***Mission Objective #5***
Power Block	A ***Field Object*** required for ***Mission Objective #5***

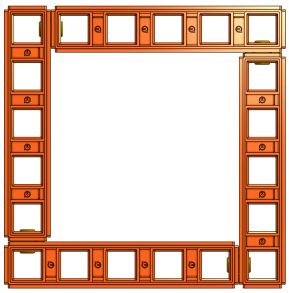
Mission Objective 1: Sorting Waste

OVERVIEW: A sudden flash storm has swept through the Metro District, toppling cargo containers and mixing landfill waste with valuable recyclables. The city's automated systems are overwhelmed! You must deploy a RVR equipped with a custom-engineered "Sort-and-Clear" plow. You have a 30-second window to manually drive RVR and clear the main thoroughfare before the morning commute begins. Be careful: the waste processing plants are high-security zones—once you breach the perimeter to drop off a load, the gates lock behind and you bring anything else to that zone.

Mission Objective 1 Setup:



1. Build a ***Waste Disposal Plow*** entirely of Snap pieces and attach it to RVR.
2. Mark the areas with markers, painter's tape, or another method:
   - ***Starting Area*** - A1, A2
   - ***Recycling Waste Collection Zone*** - H1, H2, I1, I2
   - ***Landfill Waste Collection Zone*** - H5, H6, I5, I6
3. Place one 2x Pitch Truss (***Recyclable Material***) and one 3x Pitch Truss (***Landfill Material***) in each of the following grid squares: A1, B3, D6, E2, F4, and H3. The two trusses must be placed close enough together to fit inside the ***Placement Guide*** (6x6 pitch square).



Mission Objective 1 Rules and Scoring:

Rule ID	Objective	Possible Points
RVR-M1-1	***Mission Field*** is set up correctly according to the diagram. 2x and 3x Pitch Trusses are placed close enough together to fit in the ***Placement Guide*** (6x6 pitch square).	10
RVR-M1-2	The ***Team*** engineers a ***Waste Disposal Plow*** to collect waste and push it into the correct zone.	10
RVR-M1-3	RVR and the ***Waste Disposal Plow*** begin the ***Mission Objective*** fully contained in the ***Starting Area***.	10
RVR-M1-4	This is a timed ***Mission Objective. Teams*** place a timer, stopwatch, or phone timer on the ***Mission Field***. ***Teams*** start the timer, then begin driving RVR. RVR must stop when the 30-second time limit has elapsed. ***Teams*** may not be able to remove all material.	10
RVR-M1-5	***Teams*** use manual drive to make RVR successfully sorts and transfers ***Recyclable Material*** (2x Pitch Trusses) to the ***Recycling Waste Collection Zone.*** (10 points each)	60
RVR-M1-6	RVR successfully sorts and transfers ***Landfill Material*** (3x Pitch Trusses) to the ***Landfill Waste Collection Zone.*** (10 points each)	60
RVR-M1-7	RVR can only visit a ***Waste Collection Zone*** one time. Material transferred to a zone on a second visit is not counted in the score.	
RVR-M1-8	***Teams*** receive a ***Foul*** if waste material is transferred to the wrong collection zone, RVR re-enters a closed collection zone, or if RVR leaves the ***Mission Field***. • waste in the wrong zone (-10 points each ***Foul)***	

- re-enter a closed collection zone (-10 points each ***Foul***)
- leave the ***Mission Field*** (-5 points each ***Foul***)

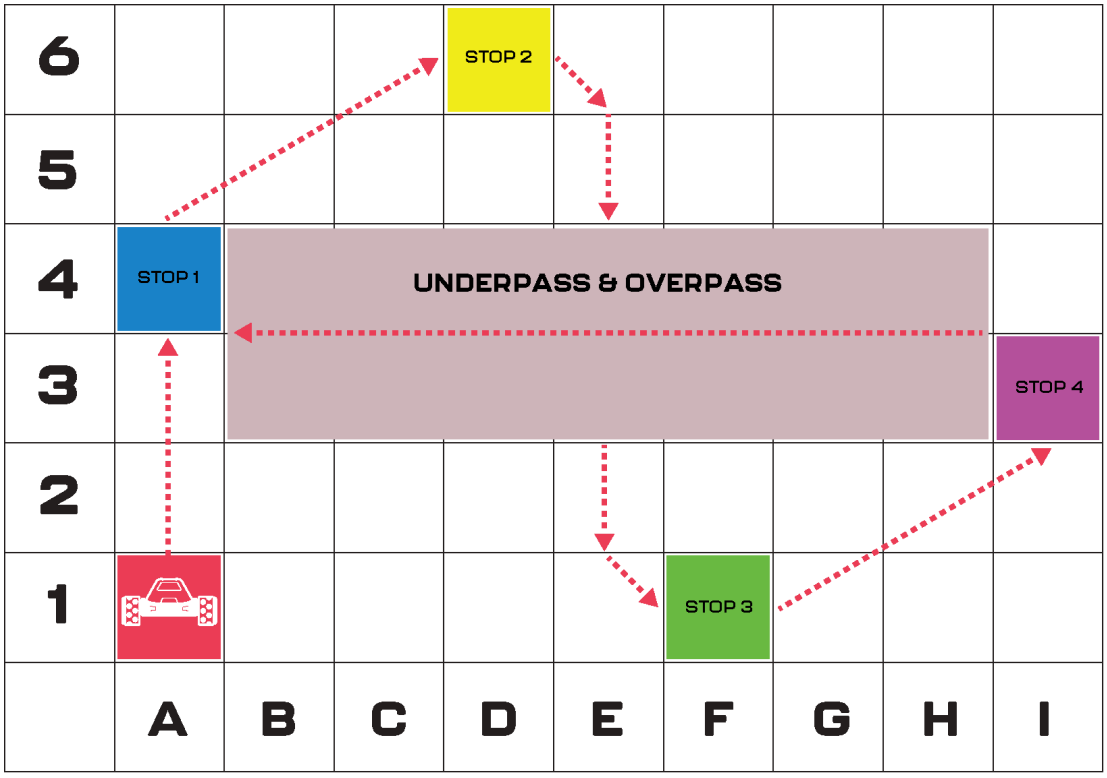
RVR-M1-9	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, their RVR program, or other efforts that surpass requirements. (0-20 points)	20
BOLT-M1-10	***Remote Submission Only:*** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, images of code, and text explanations. (0-20 points) ***In-Person And Remote Events:*** In the process of setting up and running the ***Mission Objective*****,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator*****.** (0-20 points)	20
	Max Points:	**200**

Mission Objective 2: Bus Routes

Beginner
OVERVIEW: In every great city, **"**the wheels on the bus go 'round and 'round." Public transportation is essential to get people where they need to be. In this ***Mission Objective***, ***Teams*** code RVR to autonomously follow a bus route. First, teams engineer an ***Underpass and Overpass Structure*** that is part of a bus route. RVR must be able to drive under and over the structure. Next, teams code RVR to navigate from the ***Bus Barn*** to each ***Bus Stop*** along the route, stopping to allow passengers to board. RVR should make two loops along the route before finishing back at the ***Bus Barn***.

Mission Objective 2 Set Up:

1. Engineer an ***Underpass and Overpass Structure***. The structure must be made entirely of Blueprint pieces, cardboard, card stock, and/or other readily available craft materials. The structure should include two ramps separated by a span. RVR must be able to drive under the ***Underpass*** and over the ***Overpass***. The structure must be placed entirely within grid squares B3 and B4 to H3 and H4 but doesn't have to take up this entire area.
2. Mark the ***Bus Barn*** and ***Bus Stops*** with ***Color Tiles***, markers, painter's tape, or another method:
    a. ***Bus Barn:*** A1
    b. ***Bus Stop 1:*** A4
    c. ***Bus Stop 2:*** D6
    d. ***Bus Stop 3:*** F1
    e. ***Bus Stop 4:*** I3



Mission Objective 2 Rules and Scoring:

Rule ID	Objective	Possible Points
RVR-M2-1	***Mission Field*** is set up correctly to the diagram. The ***Underpass and Overpass Structure*** is contained entirely in the designated area.	10
RVR-M2-2	The ***Team*** engineers an ***Underpass and Overpass Structure*** consisting of two ramps separated by an unsupported span. The span should: • be at least one grid square or 12x pitches long (20 points) • be at least 6x pitches tall (10 points) • allow RVR to drive under and over it (10 points) • span length is the distance between the supports touching the ***Mission Field*** Teams receive 5 extra points for each additional grid square in length that the span covers, not including the ramps leading up to the span. (max bonus 20 points)	40
RVR-M2-3	RVR *begins the* ***Mission Objective*** fully contained in the ***Bus Barn***.	10

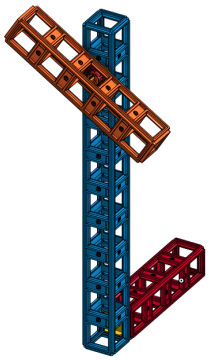
RVR-M2-4	RVR autonomously navigates and stops at each ***Bus Stop*** in order, driving under the ***Underpass*** between Stops 2 and 3, and over the ***Overpass*** between Stops 4 and 1. (10 points each stop)	40
RVR-M2-5	RVR makes a second loop along the bus route, stopping at each ***Bus Stop***. (10 points each stop)	40
RVR-M2-6	RVR should use sound, lights, and animations: • when stopped to indicate it is safe for passengers to get on and off the bus (5 points) • when driving to indicate the bus is moving and that passengers should remain seated (5 points)	10
RVR-M2-7	After making two loops along the bus route, RVR finishes back at the ***Bus Barn***.	10
RVR-M2-8	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, their RVR program, or other efforts that surpass requirements. (0-20 points)	20
BOLT-M2-9	***Remote Submission Only:*** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, images of code, and text explanations. (0-20 points) ***In-Person And Remote Events:*** In the process of setting up and running the ***Mission Objective*****,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator*****.** (0-20 points)	20
	Max Points:	**200**

Mission Objective 3: Harvest Time

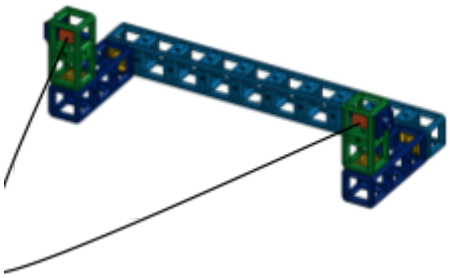
OVERVIEW: Every city needs food and the city's urban garden is ready for harvesting. In this ***Mission Objective***, teams will code RVR to autonomously harvest ***Crops*** with a ***Harvesting Attachment***. The city's citizens are counting on grocery stores and markets fully stocked with food so time is of the essence. Teams must strategize which ***Crops*** to pick before time runs out.

Mission Objective 3 Set Up:

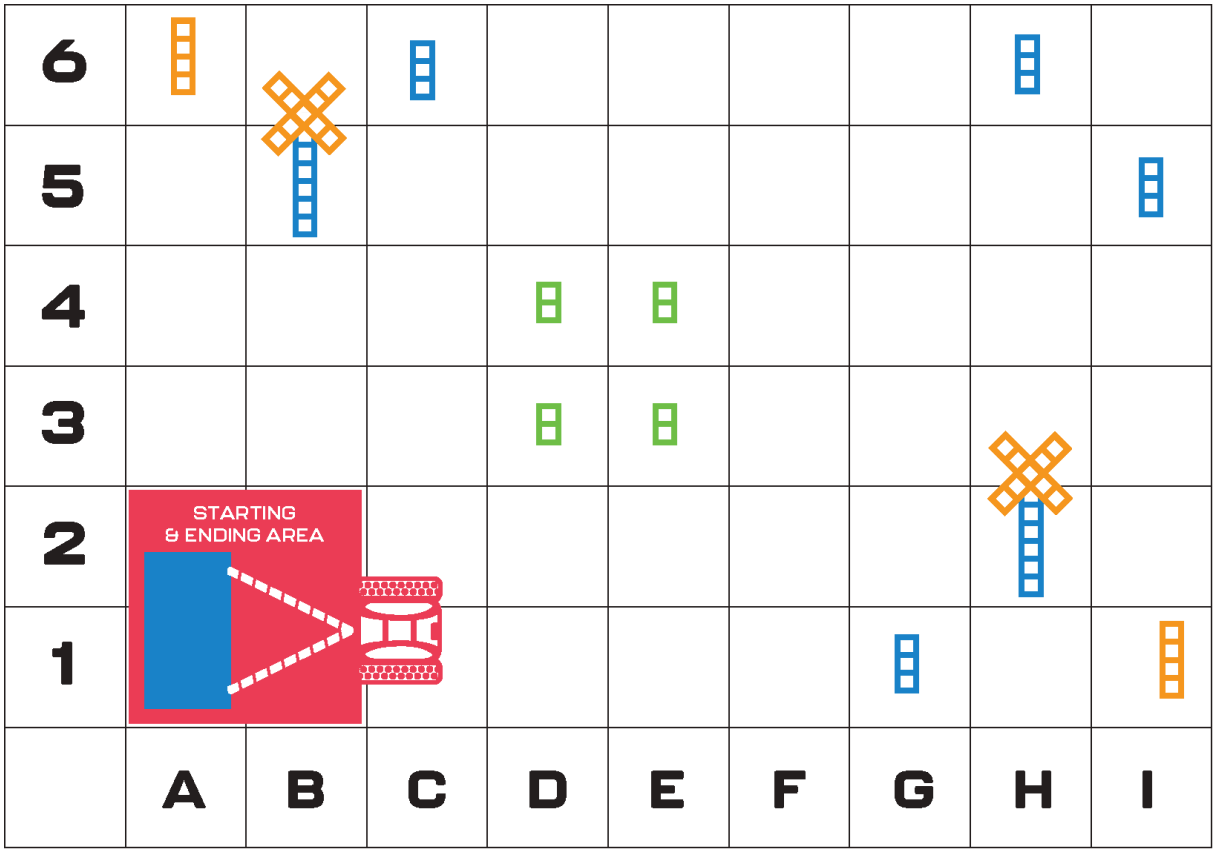
1. Build two ***Windmills*** and center them in grid squares B5 and H2.



2. Build the ***Harvesting Attachment*** and engineer a way to attach it to RVR.



3. Position Blueprint Snap trusses as ***Crops*** by laying them flat on their sides in the center of the following grid squares:
    a. 2x Pitch Trusses - D3, D4, E3, E4
    b. 3x Pitch Trusses - C6, G1, H6, I5
    c. 5x Pitch Trusses - A6, I9
4. Mark the ***Starting*** and ***Ending Area*** with markers, painter's tape, or another method in grid squares A1, A2, B1, and B2.



Mission Objective 3 Rules and Scoring:

Rule ID	Objective	Possible Points
RVR-M3-1	***Mission Field*** is set up correctly to the diagram. The ***Windmills*** are built and placed according to specs and the ***Crops*** are placed in correct grid squares.	10
RVR-M3-2	RVR *begins the* ***Mission Objective*** fully contained in the ***Starting Area***.	10
RVR-M3-3	The ***Team*** engineers a way to attach the ***Harvesting Attachment*** to RVR.	10
RVR-M3-4	This is a timed ***Mission Objective***. ***Teams*** place a timer, stopwatch, or phone timer on the ***Mission Field***. ***Teams*** start the timer, then begin execution of the program.	10
RVR-M3-5	To initiate harvesting, RVR flashes its front LEDs three times, then keeps them on through the ***Mission Objective***.	10

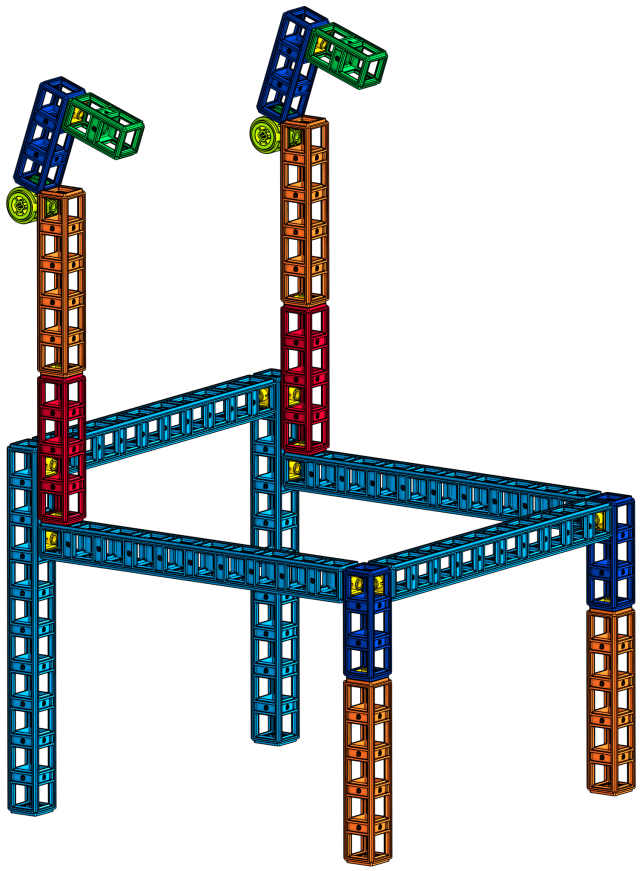
RVR-M3-6	RVR is coded to autonomously drive around the ***Mission Field*** to pick up ***Crops*** with the ***Harvesting Attachment***. RVR is allowed to drive off the ***Mission Field***. Different ***Crops*** are worth different amounts of points: • 2x Pitch Truss - 4 points • 3x Pitch Truss - 6 points • 5x Pitch Truss - 10 points To earn points for a ***Crop***, the ***Crop*** must remain in the ***Harvesting Attachment*** until the ***Harvesting Attachment*** is parked in the ***Ending Area*** at the end of the ***Mission Objective.*** (0-60 points)	60
RVR-M3-7	***Fouls*** are assessed each time RVR comes in contact with a ***Windmill***: • if RVR touches a ***Windmill*** (-5 points each ***Foul***) • if RVR knocks over a ***Windmill*** (-10 points each ***Foul***) • if RVR knocks over a ***Windmill*** and collects any part of the ***Windmill*** with the ***Harvesting Attachment*** (-20 points each ***Foul***)	
RVR-M3-8	RVR and ***Harvesting Attachment*** are parked fully contained in the ***Ending Area*** and front LEDs are turned off. .	10
RVR-M3-9	***Teams*** stop the timer once RVR and the ***Harvesting Attachment*** finish the ***Mission Objective*** in the ***Ending Area***. (> 40 sec = 0 points, < 40 sec = 40 points)	40
RVR-M3-10	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, their RVR program, or other efforts that surpass requirements. (0-20 points)	20
BOLT-M3-11	***Remote Submission Only:*** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, images of code, and text explanations. (0-20 points) ***In-Person And Remote Events:*** In the process of setting up and running the ***Mission Objective***, the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator***. (0-20 points)	20
	Max Points:	**200**

Mission Objective 4: Air Quality Monitoring

OVERVIEW: Smart cities are a breath of fresh air! That's because they have air quality sensors that help manage air pollution. In this ***Mission Objective***, teams will engineer mechanisms to deploy and activate sensors. First, teams code RVR to autonomously navigate through a ***Subway Tunnel*** dropping an air quality ***Subway Sensor*** as it passes through. Once in the ***Modification Zone***, teams add a ***Tower Sensor Activation Mechanism*** to RVR. Using ***Manual Drive Mode***, teams drive RVR to the ***Tower Sensors*** and activate them by flipping them down. This timed challenge ends when RVR drives down the ***Road*** and finishes in the ***Starting Area***.

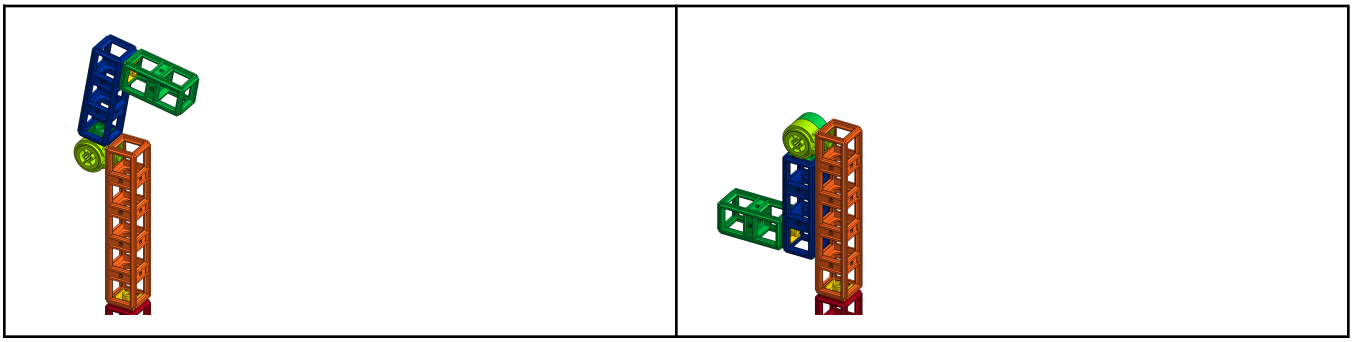
Mission Objective 4 Set Up:

1. Build the ***Subway Tunnel***. The structure must be made entirely of Blueprint pieces but can be decorated with cardboard, card stock, and/or other craft materials. Decorations should be placed on the exterior and can not interfere with RVR as it drives through the tunnel or manipulates the ***Tower Sensors***.

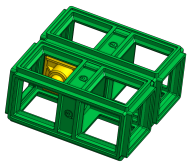


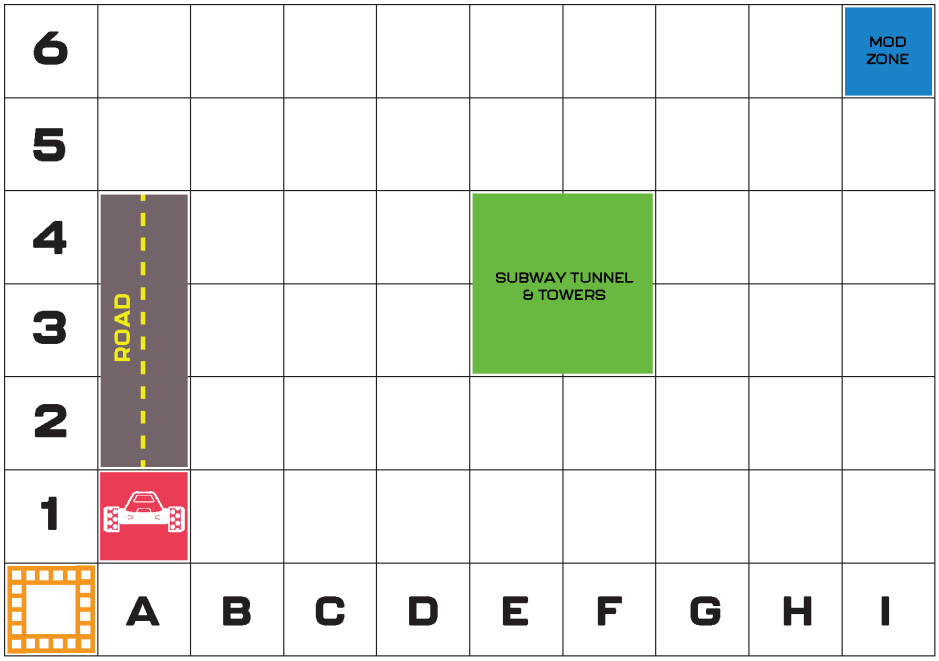
The Tower Sensors have two modes:

Up	Down



2. Mark the areas with markers, painter's tape, or another method:
    a. ***Starting Area*** - A1
    b. ***Road -*** *A2, A3, A4*
    c. ***Subway Tunnel and Towers*** - E3, E4, F3, F4
    d. ***Modification Zone*** - I6
3. Create a ***Subway Sensor*** by connecting two 2x Pitch Trusses together. The sensor will ride on RVR until it is dropped in the tunnel.





Mission Objective 4 Rules and Scoring:

Rule ID	Objective	Possible Points
RVR-M4-1	***Mission Field*** is set up correctly to the diagram. The ***Subway Tunnel*** and ***Towers*** are built according to instructions with no modification other than decorations. ***Tower Sensors*** should start in the up mode.	10
RVR-M4-2	The ***Team*** engineers a mechanism on RVR that flips the onboard ***Subway Sensor*** off RVR and into the ***Subway Tunnel*** as it drives through. The mechanism must be made from the Blueprint Snap Sphero Robotics Missions Kit, cardboard, card stock, and/or other readily available craft materials.	20
RVR-M4-3	The ***Team*** engineers a mechanism for RVR that activates the ***Tower Sensors*** by flipping them down. The mechanism must be made from the Blueprint Snap Sphero Robotics Missions Kit, cardboard, card stock, and/or other readily available craft materials. This mechanism does not start on the RVR but is added after reaching the ***Modification Zone***.	10
RVR-M4-4	RVR *begins the* ***Mission Objective*** fully contained in the ***Starting Area***.	5
RVR-M4-5	RVR autonomously navigates from the ***Starting Area,*** down the ***Road*** (exiting the ***Road*** at A5)***,*** through the ***Subway Tunnel*** and to the ***Modification Zone***.	20
RVR-M4-6	The ***Subway Sensor*** is dropped off inside the ***Subway Tunnel*** during the autonomous portion of the ***Mission Objective***.	20
RVR-M4-7	The **Tower Sensor Activation Mechanism** is attached by a ***Team Member*** in the ***Modification Zone***. Then, manual drive is turned on with the **drive on block.** 	5
RVR-M4-8	***Tower Sensors*** are activated using ***Manual Drive Mode*** with the ***Tower Sensor Activation Mechanism***. Sensors that flip down by any other means besides using the ***Tower Sensor Activation Mechanism*** will not be counted. (10 points each senor)	20
RVR-M4-8	***Teams*** finish the ***Mission Objective*** in the ***Ending Area***.	10

RVR-M4-9	This is a timed ***Mission Objective***. ***Teams*** place a timer, stopwatch, or phone timer on the ***Mission Field***. ***Teams*** start the timer, then begin execution of the program. There is a 2 minute maximum time. ● <0:45 seconds - 40 points ● 0:45 to 1:00 minute - 30 points ● 1:00 to 2:00 minutes - 20 points ● >2:00 minutes - 0 points	40
RVR-M4-10	***Fouls*** are assessed each time RVR contacts a boundary or the Subway Tunnel: ● Leave the ***Mission Field*** (-5 points each ***Foul***) ● Contact the ***Subway Tunnel*** (-5 points each ***Foul***)	
RVR-M4-11	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, their RVR program, or other efforts that surpass requirements. (0-20 points)	20
RVR-M4-12	***Remote Submission Only:*** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, images of code, and text explanations. (0-20 points) ***In-Person And Remote Events:*** In the process of setting up and running the ***Mission Objective***, the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator***. (0-20 points)	20
	Max Points:	**200**

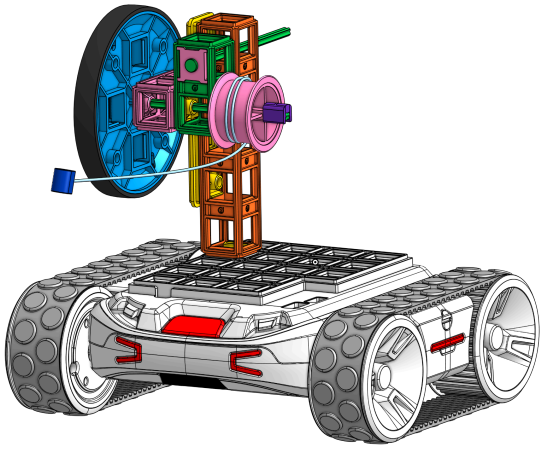
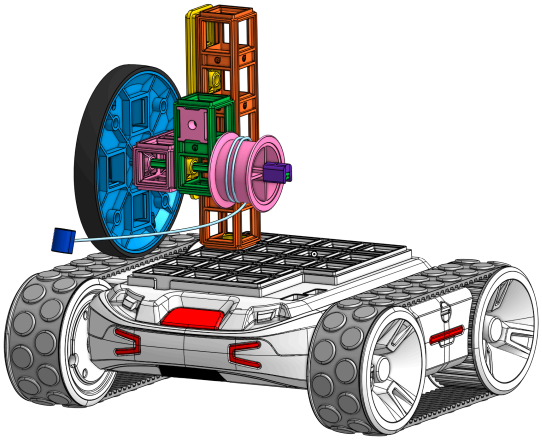
Mission Objective 5: Power Grid Maintenance

Advanced

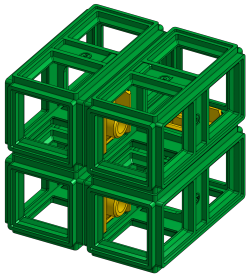
OVERVIEW: The city's power grid is down and needs to be reactivated! Teams must code RVR to navigate with color tiles to three checkpoints, pausing at each to perform a system check. After visiting all checkpoints, RVR must drive to the custom-engineered ***Docking Station***, where manual control is initiated. In the grand finale, ***Teams*** must drive RVR onto an elevated platform and use the attached ***Winch*** to pull the ***Power Block*** onto the robot, successfully restoring power to the grid.

Mission Objective 1 Set Up:

1. Build the RVR ***Winch*** and attach it to the top of RVR. The ***Winch*** has two modes:

Up: A 4x Pitch Capped Shaft holds the wheel above the treads.	Down: The shaft is removed and the wheel makes contact with the treads.
	

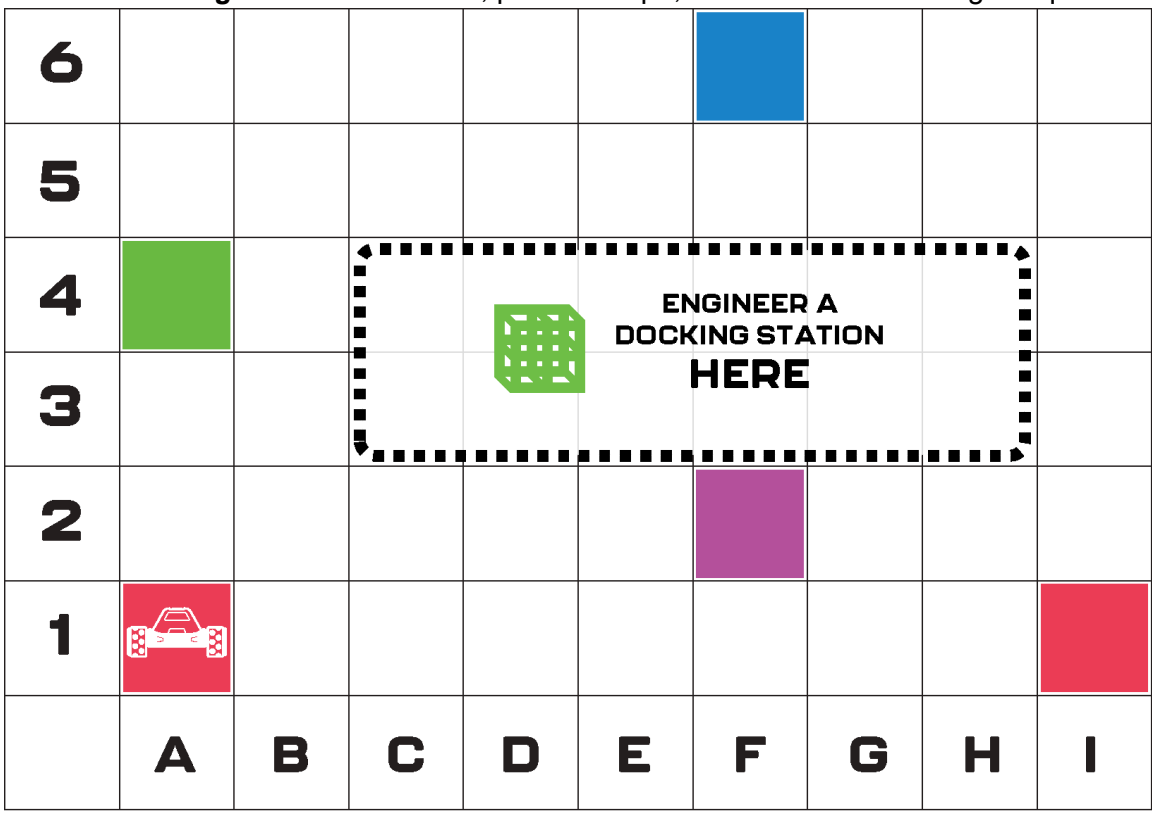
2. Build the ***Power Block***. Place it in between grid squares C3 and C4.



3. Engineer a ***Docking Station*** according to the criteria in RVR-M5-1. Place it in grid squares C3-4, D3-4, E3-4, F3-4, G3-4. The ***Docking Station*** may be attached to the ***Mission Field*** with tape or other materials.
4. Position RVR color tiles in the following grid squares:

a. green - A4
b. blue - G6
c. red I1
d. purple - H2

5. Mark the ***Starting Area*** with markers, painter's tape, or another method in grid squares A1.



.

Mission Objective 5 Rules and Scoring:

Rule ID	Objective	Possible Points
RVR-M5-1	Engineer a ***Docking Station***. The ***Docking Station***: • is built entirely from Blueprint parts in the Blueprint Snap Sphero Robotics Missions Kit, cardboard, card stock, and/or other craft materials. (5 points) • is fully contained inside of the ***Docking Station*** zone. (5 points) • includes a ***Docking Platform***, an elevated platform that RVR can climb onto and allow its treads to rotate freely without moving the robot. The ***Docking Platform*** is at least 2x Blueprint pitches above the ***Mission Field***. (2x pitches = 20 points, 3x pitches = 25 points, 4x pitches = 30 points, each additional pitch above 4x pitches = +5 points) • includes a **Docking Ramp** that allows RVR to climb onto the	50

Docking Platform. (10 points)

RVR-M5-2	***Mission Field*** is set up correctly to the diagram.	5
RVR-M5-3	RVR *begins the* ***Mission Objective*** fully contained in the ***Starting Area***. The ***Winch*** is attached to RVR in the "up" mode and the rope is fully wound around the spool.	5
RVR-M5-4	RVR moves autonomously from the ***Starting Area*** to the green tile. When it sees the green tile, it pauses and strobes its LEDs the color green three times.	10
RVR-M5-5	RVR moves autonomously from the green tile to the blue tile. When it sees the blue tile, it pauses and strobes its LEDs the color blue three times.	10
RVR-M5-6	RVR moves autonomously from the blue tile to the red tile. When it sees the red tile, it pauses and strobes its LEDs the color red three times.	10
RVR-M5-7	RVR moves autonomously from the red tile to the purple tile. When it sees the purple tile, it pauses and strobes its LEDs the color purple three times. Then, ***Manual Drive Mode*** is turned on with the **drive on block.** 	10
RVR-M5-8	The ***Team*** manually drives RVR up the ***Docking Ramp*** onto the ***Docking Station Platform***.	30
RVR-M5-9	The ***Team*** lowers the ***Winch*** into "down" mode, unwinds the rope, and connects the end of the rope to the ***Power Block***. The ***Team*** may physically touch RVR, the ***Winch***, and the ***Power Block***, in this part of the ***Mission***.	10
RVR-M5-10	RVR engages its motors to pull the ***Power Block*** up onto the RVR chassis.	20
RVR-M5-11	***Teams*** can demonstrate creativity, attention to detail, and rigor through ***Mission Field*** design and decoration, their RVR program, or other efforts that surpass requirements. (0-20 points)	20

BOLT-M5-12	***Remote Submission Only:*** In the submission presentation, the ***Team*** clearly and thoroughly documents the ***Mission Objective*** with video, images of code, and text explanations. (0-20 points) ***In-Person And Remote Events:*** In the process of setting up and running the ***Mission Objective*****,** the ***Team*** clearly and thoroughly articulates an understanding of code and strategy with the ***Evaluator*****.** (0-20 points)	20
	Max Points:	**200**

Glossary:

Program	***Sphero Robotics Missions*** comprises three unique ***Programs***: • ***indi Missions*** • ***BOLT Missions*** • ***RVR Missions***
Student	Anyone born after May 1, 2007
Team	A group of ***Students***
U9 Student	Any ***Student*** born on or after Sept 1, 2017 meaning they will be 8 or younger on Aug 31, 2026
U12 Student	Any ***Student*** born on or after Sept 1, 2014 meaning they will be 11 or younger on Aug 31, 2026
U15 Student	Any ***Student*** born on or after Sept 1, 2011 meaning they will be 14 or younger on Aug 31, 2026
indi Missions	***Teams*** competing in this ***Program*** must consist of only ***U9 Students*** and at least one ***Team Coordinator***
BOLT Missions	***Teams*** competing in this ***Program*** must consist of only ***U12 Students*** and at least one ***Team Coordinator***
RVR Missions	***Teams*** competing in this ***Program*** may consist o*f only* ***U15 Students***, and at least one ***Team Coordinator***
Team Coordinator	An adult in a supervisory role for the ***Students*** that will handle the registration, submission, and management of ***Team*** meetings. ***Teams*** may have more than one ***Team Coordinator***.
Mission Objectives	Each ***Program*** is broken up into ***Mission Objectives*** that ***Teams*** will be evaluated on based on guidelines in this document
Mission Field	A defined space for each ***Program***. Reference individual ***Mission Manual*** for specific ***Mission Field*** guidelines

Individual Mission Score	A ***Team's*** score for an individual ***Mission Objective*** recorded by an ***Evaluator***
Total Score	The total combined score of all ***Individual Mission Scores*** for a ***Team***
Starting Area	The area of the ***Mission Field*** where robots begin a ***Mission Objective***
Ending Area	When required, the area of the ***Mission Field*** where robots finish their program
Manual Drive Mode	A driver controlled portion of a ***Mission Objective*** instead of programmed commands
Foul	Points deducted in some ***Mission Objectives*** if a team commits a ***Foul*** as outlined in the ***Mission Manual***. Unless stated otherwise, there is no limit on the number of ***Fouls*** a Team can receive in a ***Mission Objective***.
Obstacles	Defined as any object placed in the ***Mission Field*** as part of the setup for a ***Mission Objective*** that should be avoided as outlined in the ***Mission Manual***. If a robot drives into an ***Obstacle***, they will receive a ***Foul***.
Field Element	An element added to the ***Mission Field*** as specified in the ***Season*** rules
Field Object	A scored object added to the ***Mission Field*** as specified in the ***Season*** rules
Season	The approved timeline for participation in the ***Sphero Robotics Missions***. A standard ***Season*** runs from June 2026 through May 2027.
Event Host	Approved adult coordinator and primary contact to organize, plan, and implement successful Sphero Robotics Mission ***Events*** with the help of TEAM Alliance
Evaluator	A volunteer responsible for evaluating a ***Team's*** mission attempts during an ***Event***
Remote Submission	***Teams*** submit pre-recorded ***Mission Objectives*** to an ***Event Host*** for evaluation. This is an option for remote ***Season*** registrations.
In-Person Event	Events that are included as an option with in-person ***Season*** registrations. These events allow a ***Team*** to run ***Mission Objectives*** at a location with other ***Teams*** and an in-person ***Evaluator***.
Prequalifying Event	An early ***Season In-Person Event*** that doesn't qualify for a ***Championship Event*** (or any other ***Event***). An in-person ***Team*** registration does not include entry into a **Prequalifying Event.**
Qualifying Event	A ***Season In-Person Event*** that qualifies a ***Team*** for ***Championship Events***. An in-person ***Team*** registration includes entry into one **Qualifying Event.**
Remote Event	***Events*** that are included as an option with in-person ***Season*** registrations. These events allow a ***Team*** to run ***Mission Objectives*** remotely with other ***Teams*** and a

	remote ***Evaluator***.
Championship Event	A state, regional, or national event that serves as the culminating competition for ***Teams*** that qualify through designated ***Qualifying Events***. In the U.S., ***Championship Events*** are typically state-level, but may include multiple ***Championship Events*** within a single state or combining multiple states into a regional ***Championship Event.*** Internationally, regional or national ***Championship Events*** are used where geographic considerations apply.